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ABSTRACT

This document is the Process Education for Teachers Package, which was designed to give teachers an understanding of the learning process. The package contains an introductory booklet, a research paper, and 13 modules. The introductory booklet presents a history of the formation of the materials and the rationale for the emphasis on the "process of learning" as opposed to right and wrong answers. The research paper presents the argument that the end goal of process education is the establishment of those pupil behaviors most likely to produce continuing personal growth and effectiveness, with the achievement of these behaviors contingent upon the appropriate interaction of curriculum, teacher, pupil, and learning environment. Each module represents a single session of the workshop. Module booklets are organized to help workshop leaders prepare for each module and act as guides during the sessions. Each module has the following form: a) contents listing; b) rationale and objectives; c) a list of background reading, preparations leaders must make, and materials needed; d) the steps of the module, indicating the approximate time to be allowed, procedures to be followed, and instructions to be given; and e) feedback questions. Among the topics of the modules are nonverbal communication, natural selection, expectations, norms, and problem-solving sequences. (JA)

ED 084256

PROCESS EDUCATION FOR TEACHERS

MODULE 1

USING LIFE ROPES TO INITIATE GROUP INTERACTION

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Northwest Regional Education Laboratory (Portland, Ore.), "Paraphrasing: A Basic Communication Skill for Improving Interpersonal Relationships," from Interpersonal Communications package (published by XICOM Inc., Tuxedo, N.Y.)

Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.), *Man: A Course of Study,* Teacher Guide, Book 3 (disseminated by Curriculum Development Associates, Washington, D.C.)

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RATIONALE

This introductory lesson illustrates the learning assumptions that underlie the *Man: A Course of Study* (MACOS) curriculum. It is also effective in demonstrating role expectations for both pupils and teachers.

The content of the module is in harmony with the objectives of a process-oriented curriculum. The process-oriented person must possess an adequate view of man. To do this, he first reflects upon and develops an awareness of his own existence—a unique and highly personal task.

In the course of this lesson, a communications skill—paraphrasing—is introduced and opportunity given to practice it. Workshop participants, in teams of two and four, begin to interact.

The module design promotes active involvement of all participants. It also helps them to gain skill in analyzing their personal styles of communication and the relationship between these styles and MACOS role expectations.

OBJECTIVES

To facilitate the involvement of individuals in a newly formed group.

To see that each individual brings his unique self to the task (of constructing life ropes).

To encourage active involvement in the learning process and in the role expectations for teachers and pupils inherent in MACOS.

To inform participants about MACOS material dealing with the life cycle.

To promote team-building by creating awareness of elements of personal style in communication and by beginning to analyze the effects of these elements in communicating with others.

TO PREPARE FOR THIS MODULE

READ *Man: A Course of Study*, Teacher Guide, Book 3, lessons A-C

ASSEMBLE these materials:
- index cards
- magic markers
- construction paper
- string
- tape
- scissors
- magazine pictures
- paste
- stapler

READ Handout #1 (pp. 14-15), "Paraphrasing: A Basic Communication Skill for Improving Interpersonal Relationships."

PREPARE this handout for distribution among participants.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 1: **INTRODUCTION TO THE LIFE LINE CONCEPT: WHAT IS A LIFE TIME?**

Allow: **5-10 minutes**

Materials: ***MACOS*, Teacher Guide, Book 3, Introductory lessons.**

How to Proceed: **Without any prefatory remarks, show the group a length of string. Tell them it represents a lifetime.**

Have participants speculate on the various points on the string: birth, death, reproduction, etc.

Instructions to Participants (in your own words):

Construct a life rope, labeling events that you think make up your own lifetime. Use any materials any way you want.

Take time to reflect on what you're doing. You can work alone, or with others in this room or elsewhere.

(Do not let this introductory period extend more than 2-3 minutes.)

Objectives:

To introduce the concept of a life line.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 2:	**LIFE ROPE CONSTRUCTION: REPRESENTATION OF ONE'S LIFETIME**
Allow:	about 45 minutes
Materials:	index cards magic markers construction paper string tape scissors magazine pictures paste stapler
How to Proceed:	*Provide only limited direction. Discourage appeals to authority.* Allow participants to move freely into the activity without further direction. Even if you are prodded to do so, *do not interfere* or offer suggestions or answers.

Instructions to Participants (in your own words):

(Following introductory discussion), use the materials available to construct your own individual life ropes.

Objectives:

To stimulate personal reflection about "what's in a lifetime."

To encourage individual expression of what each participant sees as his lifetime.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 3:	SHARING LIFE ROPES IN DYADS: PAIR AND SHARE
Allow:	about 8 minutes
Materials:	constructed life rope
How to Proceed:	Invite participants to form pairs (dyads).

Instructions to Participants (in your own words):

Share whatever you wish about your life rope with your fellow team member.

Objectives:

To use the life rope as a vehicle for introductory conversation.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 4:	**BRIEF DISCUSSION ON SHARING, USING PARAPHRASING AS A TECHNIQUE**
Allow:	**about 10 minutes**
Materials:	**HANDOUT #1 (pp. 14-15), distributed among participants**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Read the handout. Reflect on this dyad activity.

Objectives:

To introduce the skill of paraphrasing.

HANDOUT #1: Paraphrasing: A Basic Communication Skill for Improving Interpersonal Relationships

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

The Problem

Tell somebody your phone number and he will usually repeat it to make sure he heard it correctly. However, if you make a complicated statement, most people will express agreement or disagreement without trying to insure that they are responding to what you intended. Most people seem to assume that what they understand from a statement is what the other intended.

How do you check to make sure that you understand another person's ideas, information or suggestions as he intended them? How do you know that his remark means the same to you as it does to him?

Of course, you can get the other person to clarify his remark by asking, "What do you mean?" or, "Tell me more." or by saying, "I don't understand." However, after he has elaborated, you still face the same question. "Am I understanding his idea as he intended it to be understood?" Your feeling of certainty is no evidence that you do in fact understand.

The Skill

If you state in your own way what his remark conveys to you, the other can begin to determine whether his message is coming through as he intended. Then, if he thinks you misunderstand, he can speak directly to the specific misunderstanding you have revealed. The term *"paraphrase"* can be used for *any means of showing the other person what his idea or suggestion means to you.*

Paraphrasing, then, is any way of revealing your understanding of the other person's comment in order to test your understanding.

An additional benefit of paraphrasing is that it lets the other know that you are interested in him. It is evidence that you do want to understand what he means.

If you can satisfy the other that you really do understand *his* point, he will probably be more willing to attempt to understand your views.

Paraphrasing, thus, is crucial in attempting to bridge the interpersonal gap. (1) It increases the accuracy of communication, and thus the degree of mutual or shared understanding. (2) The act of paraphrasing itself conveys feeling . . . your interest in the other, your concern to see how he views things.

Learning to Paraphrase

People sometimes think of paraphrasing as merely putting the other person's ideas in another way. They try to say the same thing with different words. Such word-swapping may result merely in the illusion of mutual understanding. See the following example:

Sarah:	Jim should never have become a teacher.
Fred:	You mean teaching isn't the right job for him?
Sarah:	Exactly! Teaching is not the right job for Jim.

Instead of trying to reword Sarah's statement, Fred might have asked himself, "What does Sarah's statement mean to me?" In that case the interchange might have sounded like this:

Sarah: Jim should never have become a teacher.
Fred: You mean he is too harsh on the children . . . maybe even cruel?
Sarah: Oh, no. I meant that he has such expensive tastes that he can't ever earn enough as a teacher.
Fred: Oh, I see. You think he should have gone into a field that would have insured him a higher standard of living?
Sarah: Exactly! Teaching is not the right job for Jim.

Effective paraphrasing is not a trick or a verbal gimmick. It comes from an attitude, a desire to know what the other means. And to satisfy this desire you reveal the meaning his comment had for you so that the other can check whether it matches the meaning he intended to convey.

If the other's statement was general, it may convey something *specific* to you.

Larry: I think this is a very poor textbook.
You: Poor? You mean it has too many inaccuracies?
Larry: No, the text is accurate, but the book comes apart too easily.

Possibly the other's comment suggests an *example* to you.

Laura: This text has too many omissions; we shouldn't adopt it.
You: Do you mean, for example, that it contains nothing about the Negro's role in the development of America?
Laura: Yes, that's one example. It also lacks any discussion of the development of the arts in America.

If the speaker's comment was very specific, it may convey a *more general* idea to you.

Ralph: Do you have 25 pencils I can borrow for my class?
You: Do you just want something for them to write with? I have about 15 ball-point pens and 10 or 11 pencils.
Ralph: Great. Anything which writes will do.

Sometimes the other's idea will suggest its *inverse* or *opposite* to you.

Stanley: I think the Teachers' Union acts so irresponsibly because the administration has ignored them so long.
You: Do you mean that the T.U. would be less militant now if the administration had consulted with them in the past?
Stanley: Certainly. I think the T.U. is being forced to more and more desperate measures.

To develop your skill in understanding others, try different ways of conveying your interest in understanding what they mean and revealing what the other's statements mean to you. Find out what kinds of response are helpful ways of paraphrasing for you.

The next time someone is angry with you or is criticizing you, try to paraphrase until you can demonstrate that you understand what he is trying to convey as he intends it. What effect does this have on your feelings and on his?

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 5:	**SHARING LIFE ROPES IN QUARTETS**
Allow:	**about 10 minutes**
Materials:	**constructed life rope**
How to Proceed:	**Suggest grouping in teams of four. Even though participants are divided into groups, sharing within the groups should be optional. No participant is obligated to share his life rope unless he wants to.**

Instructions to Participants (in your own words):

Practice paraphrasing while you share anything you want to share about your life rope with other members of your quartet.

Objectives:

To provide opportunity for practice in paraphrasing.

To use the life rope as a vehicle for increased interaction among workshop participants.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 6: ANALYZING GROUP PROCESS:
(A) SHARING IN DYADS
(B) SHARING IN QUARTETS
(C) PARAPHRASING

Allow: 15-20 minutes

Materials: NONE

How to Proceed: *SPECIAL PROCEDURES*

Raise the following questions in the discussion:

1. Did you feel comfortable in sharing your life rope? More comfortable in dyad or quartet?
2. Did the information in the handout affect your behavior and thereby influence your interaction with the others?
3. How well do you think you listened?
4. Were you able and willing to stick to the task? Or did you introduce extraneous items?
5. Did you learn anything about your own behavior in a new group?
6. If you felt anxious, were you aware of how you might have communicated your anxiety non-verbally? (For example, laughter, eye contact, change in glandular output)

Instructions to Participants (in your own words):

Compare and contrast your feelings about sharing personal experiences in dyads, in quartet

Talk about whether input and your practice in paraphrasing influenced communication within the quartet.

Objectives:

To begin to analyze the process of communication and the factors that influence it.

USING LIFE ROPES TO INITIATE GROUP INTERACTION

Step 7:	**REVIEW AND SUMMARY: ANALYZING LIFE ROPE CONSTRUCTION** **(A) ASSUMPTIONS ABOUT LEARNING** **(B) TEACHER/PUPIL ROLE**
Allow:	15-20 minutes
Materials:	the constructed life ropes *MACOS*, Teacher Guide, Book 3, lessons A-C
How to Proceed:	**For discussion, develop key questions that draw out the significance of this activity. For example, encourage participants to describe their own reactions. Accept *all* answers.** **Display the life ropes for viewing.**

Instructions to Participants (in your own words):

Based on the life rope activity, let's talk about the underlying learning assumptions and what these assumptions mean in terms of teacher-pupil roles.

(See questions, Teacher Guide, Book 3, p. 14, item 4.)

Objectives:

To explore the learning assumptions basic to the life rope activity.

To begin to explore the teacher/pupil roles that such assumptions require.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. I was able to express myself (rank according to scale):

(a) in the dyad

1	2	3	4	5	6
as much as I wanted					not at all

Why?

(b) in the quartet

1	2	3	4	5	6
as much as I wanted					not at all

Why?

(c) in the large group

1	2	3	4	5	6
as much as I wanted					not at all

Why?

2. How did you feel about the life rope activity? Why did you feel this way?

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PROCESS EDUCATION FOR TEACHERS

MODULE 2

EXPECTATIONS

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Northwest Regional Education Laboratory (Portalnd, Ore.), Film Introduction, Briefing on Film X, Briefing on Film Y, Adjective Checklist, "Expectations of Others," "Expectations of Self," from Interpersonal Communications package (published by XICOM Inc., Tuxedo, N.Y.)

Northwest Regional Education Laboratory, film, Unit 7, Interpersonal Communications package (available for rental)

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RATIONALE

This module was designed to provide a theoretical base leading to a discussion and analysis of (1) the extent to which expectations influence our perception of others' behavior; (2) the influence of self-expectations on information-processing; (3) the influence of self-expectations on performance (self-fulfilling prophecy); and (4) the personal implications of self-expectations for participation in this workshop.

The design of this module requires workshop leaders and participants to share their expectations for the workshop experience, creating a climate conducive to open communication.

OBJECTIVES

To discover the influence expectations have on one's perception of oneself and others.

To analyze the effects expectations have on skill performance and relate this analysis to workshop participation.

TO PREPARE FOR THIS MODULE

PREVIEW the film (rented from XICOM, Tuxedo, N.Y.).

SET UP projector and check to make sure it is functioning properly.

READ Handouts #2 (p. 8), ##3 and 4 (pp. 12-13), #5 (p. 18), #6 (pp. 28-29), and #7 (p. 34).

PREPARE these handouts for distribution among participants.

ASSEMBLE these materials:

pencils
chart paper
magic markers
masking tape

EXPECTATIONS

Step 1:	**INTRODUCTION TO FILM**
Allow:	**3 minutes**
Materials:	**Handout #2 (p. 8), distributed among participants**
How to Proceed:	**Rehearse the sequence of steps.**

Instructions to Participants (in your own words):
Read Handout #2 aloud.

Objectives:
To introduce the sequence of steps participants will follow.

HANDOUT #2: Introduction to Film

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

This film is about Don, a teacher, encountering three individuals. In a few minutes you will receive briefings about the teacher in the film. After viewing the film you will receive a list of adjectives from which you will check those adjectives that most apply to the teacher.

EXPECTATIONS

Step 2: **BRIEFING FOR FILM**

Allow: **3 minutes**

Materials: Handouts ##3 and 4 (pp. 12-13).

How to Proceed: **Each participant receives a briefing sheet (Handout #3 or #4), randomly distributed. Make sure participants do not share briefing sheets.**

Instructions to Participants (in your own words):

Please read your briefing sheet in silence and without comment.

Objectives:

To provide two different sets of expectations for a common experience.

HANDOUT #3: Briefing on Film X

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Don is a conscientious and well-liked teacher. He feels a little insecure because of his color and tries very hard to please. In ten years of teaching Don has only been late four times. Today you will be viewing his fifth late arrival.

HANDOUT #4: Briefing on Film Y

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Don is a new teacher who is having a very hard time adjusting to his new position. He very often comes to school late and most of his colleagues feel that he has a constant chip on his shoulder. You will be viewing Don arriving late at school once again.

EXPECTATIONS

Step 3:	**FILM VIEWING (first half)**
Allow:	**3 minutes**
Materials:	**film** **projector**
How to Proceed:	**Show first part of film to participants.**

Instructions to Participants (in your own words):

None

Objectives:

To present the same situation to all group members.

EXPECTATIONS

Step 4:	**ADJECTIVE CHECKLIST**
ow:	**5 minutes**
Materials:	**Handout #5 (p. 18), pencils**
How to Proceed:	**Distribute handout and pencils to participants.**

Instructions to Participants (in your own words):

Check the adjectives on this list which you feel best describe Don.

Objectives:

To generate data based on participants' perceptions.

HANDOUT #5: Adjective Checklist

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Check the adjectives which you feel apply to Don.

_____ 1. Angry
_____ 2. Kind
_____ 3. Hostile
_____ 4. Loving
_____ 5. Impatient
_____ 6. Hard-working
_____ 7. Judgmental
_____ 8. Concerned
_____ 9. Insecure
_____ 10. Caring
_____ 11. Resentful
_____ 12. Pleasant
_____ 13. Lazy
_____ 14. Confident

Add any others not listed here which you think apply.

Step 5: **TALLYING DATA**

Allow: **10 minutes**

Materials:
chart paper
magic markers
masking tape

How to Proceed: **Prepare on chart paper an adjective checklist followed by two columns, labeled X and Y. Record participants' responses in the appropriate columns.**

Instructions to Participants (in your own words):

Identify the briefing sheet you received (X or Y). Which adjectives did you check?

Objectives:

To record data generated.

EXPECTATIONS

Step 6: **SHARING BRIEFINGS**

Allow: **3 minutes**

Materials: **Handouts ##3 and 4 (briefing sheets; pp. 12-13)**

How to Proceed: **Read aloud the two briefing sheets.**

Instructions to Participants (in your own words):
NONE

Objectives:

To make participants aware of the two different sets of perceptions resulting from the two different briefing sheets.

EXPECTATIONS

Step 7:	**GROUP DISCUSSION**
Allow:	**8 minutes**
Materials:	**chart generated by participants' responses**

How to Proceed:	**Have participants form small groups.**

Instructions to Participants (in your own words):

Based on the data recorded on the chart, talk about the ways in which expectations influence perception.

Objectives:

To make participants aware of the two different sets of perceptions resulting from the two different briefing sheets.

EXPECTATIONS

Step 8:	**THEORY INPUT AND CONTINUED DISCUSSION**
Allow:	**8 minutes**
Materials:	**Handout #6 (pp. 28-29)**

How to Proceed:	**Distribute handout among the participants.**

Instructions to Participants (in your own words):
Read the handout. Then continue your group discussion.

Objectives:
To provide a theoretical input on expectations.

HANDOUT #6: Expectations of Others

NOTE: This handout, in form suitable for reproduction, will be found in the handouts section of the Process Education for Teachers package.

Research has demonstrated the expectations or mental set of an individual influences his perceptions. Rosenthal and Jacobson[1] performed an exciting piece of research with startling results. These researchers deliberately misinformed teachers in a school about the abilities of their pupils. In each of the school's 18 classrooms an average of 20 percent of the children, randomly selected, were reported to the classroom teacher as showing, as a result of an IQ test, "unusual" potential for intellectual gains. Eight months later these "unusual" children showed significantly greater gains in IQ than the remaining pupils in the class. A profound implication of this study, according to the authors, is that expectations can be *self-fulfilling*.

If we expect an individual to behave in a certain way it is more than likely we see him behave that way. Murray[2] had subjects describe the picture of a man under two conditions before and after they had played a game of "murder." The subjects tended to see much more maliciousness in the man's features after the game than before the game. Mental set can be an important factor in determining selective perception.

Often, teachers who put "halos" on their favorite students or "dunce caps" on the trouble makers will interpret the student's behavior within their own expectations. This distortion of reality may have harmful effects on the good student as well as the poor student. It especially will effect the relationship between teacher and student. Obviously these implications are applicable to other relationships than teacher-student.

You have just participated in such an "expectation experiment." You were given two different briefings about "Don" (see briefings X and Y). You can see the two listings of adjectives for "Don" on the chart. You all watched the *same film*. Do you see differences in the two lists of perceptions apparently based on the briefings? Discuss the implications with your groups.

---

[1] Rosenthal and Jacobson, 1967.

[2] H. A. Murray, "The Effects of Fear upon Estimates of the Maliciousness of Other Personalities," *Journal of Social Psychology*, 4 (1933), 310-329.

EXPECTATIONS

Step 9:	**FILM VIEWING (second half)**
Allow:	**10 minutes**
Materials:	**film** **projector** **Handouts ##3 and 4 (briefings; pp. 12-13)**
How to Proceed:	**Show second part of film to participants.**

Instructions to Participants (in your own words):

As you view the film, be aware of your own responses to the adjective checklist.

Objectives:

To become aware of the extent to which expectations influence perceptions.

EXPECTATIONS

Step 10: **EXPECTATIONS OF SELF**

Allow: **10 minutes**

Materials: **Handout #7 (p. 34), distributed among participants**

How to Proceed: **This is a personal reflection time: no discussion.**

Instructions to Participants (in your own words):

Read this handout and reflect on the question: "How might your expectations of yourself influence your participation in this workshop?"

Objectives:

To identify personal implications of self-expectations for participation in the workshop.

HANDOUT #7: Expectations of Self

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Evidence indicates self-expectations influence performance. If you expect to do poorly your behavior will more than likely bear this out, thereby confirming your self-expectations. This is known as the "self-fulfilling prophecy." Examples of this are constantly being played out in our everyday experiences. For instance, it's the salesman who says, "You don't want to buy my product do you?" that generally makes few sales. An example most teachers are familiar with is the student who expects to fail and, of course, does. Or the student who says, "I can't do that," and doesn't try at all.

We can probably think of many occasions in our own lives when we've entered situations with confidence and have achieved success. Conversely, many challenges which we've failed first and met later have contained only one element of difference—our own attitude about ourselves.

EXPECTATIONS

Step 11:	**DISCUSSION OF WORKSHOP EXPECTATIONS**
Allow:	**30 minutes**
Materials:	**chart paper** **magic markers** **masking tape**
How to Proceed:	**The contract obligations, or expectations, of the workshop leaders should be revealed, in order to establish a climate for openness.** **If there are major discrepancies among leaders' and/or participants' expectations, immediate action must be taken to resolve them.** **(It is assumed that participants were informed of the workshop design prior to the workshop itself, so that expectations had already been set.)**

Instructions to Participants (in your own words):

Divide into small groups or no more than six people. Generate lists of your expectations of this workshop. The workshop leaders will also generate a list.

These lists will be used as the basis for total group discussion. Discrepancies among the lists will be analyzed.

Objectives:

To generate and share data about workshop expectations.

To establish a climate for open communication among workshop participants and leaders.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. How close to your expectations for this workshop have the day's activities been? (rank according to scale)

1	2	3	4	5	6
altogether different					very close to my expectations

2. How helpful was this exercise in confronting you with the effect that expectations have on perception?

1	2	3	4	5	6
not at all helpful					very helpful

3. Do you feel that any further clarification is needed about the workshop's expectations (that is, your role and/or the role of the workshop leader)?

   If so, which expectations need clarifying?

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PROCESS EDUCATION FOR TEACHERS

MODULE 3

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RATIONALE

This module was designed to introduce the concept of a norm and to develop awareness of how norms are established and how they function to affect communication.

To illustrate the effect of norms on communication, the design of this module requires that participants be involved in identifying norms that are being established in the workshop situation. They must also discuss the implications of these norms for communication. The design also includes a discussion of how classroom and school-system norms affect communication (a) between pupils and teacher, (b) among pupils, (c) among teachers, and (d) between teachers and supervisors.

OBJECTIVES

To introduce the concept of a norm.

To create awareness of how norms are established and how they function to affect communication.

To involve participants in analyzing the development of norms and their effect on communication, both in the workshop and in the "back-home" situation.

TO PREPARE FOR THIS MODULE

READ Handouts #8 (pp. 8-9), #9 (p. 14), and #10 (p. 20)

PREPARE these handouts for distribution among participants.

ASSEMBLE these materials:

- pencils
- chart paper
- magic markers
- masking tape

NORMS

Step 1:	**THEORY INPUT**
Allow:	**8 minutes**
Materials:	**Handout #8 (pp. 8-9)**

How to Proceed: **Distribute handout among participants.**

Instructions to Participants (in your own words):

Read the handout and reflect on the questions at the end.

Objectives:

To provide participants with knowledge of how norms are established and how they function in a group.

HANDOUT #8: What is a Norm?

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

A norm is a thing that develops in groups. A norm exists when most people in a group arrive at doing a particular thing in a particular way, because they have come to expect each other to behave that way. Here are some examples. When formally introduced, most men in the United States are usually expected to include a handshake in their greeting while women may or may not. In some family groups, most members of the family usually get their own breakfast on Sunday morning. In some faculty groups, most members usually address each other by their last names when in the faculty lounge. In other faculty groups, first names are the norm when in the faculty lounge. Some faculties don't have a lounge.

Sometimes a norm is referred to as a custom or style. It may relate to specific rules that have been set forth. It may be simply thought of as the "in" thing to do. It may be a thing that most people in a particular group do without ever having thought clearly about it. A norm can develop so that everybody does a thing the same way. "All the women in this group wear dark hats on Sunday." Or the norm can be, "All the women in this group do whatever they please about wearing hats on Sunday." Or, "Most of the women wear dark hats on Sunday, but a few can be expected not to wear hats at all." Thus, a norm doesn't necessarily mean that everyone does a thing exactly in the same way. The idea is not one of conformity. Indeed, a norm can develop to support variety. A norm may say, "It's good to have differences."

Norms are not built from scratch. Norms develop from the values, expectations and learned behaviors that the individuals in a group bring with them. A norm in a particular group is usually arrived at implicitly. That is, people arrive at their way of doing the thing in question without giving much thought or discussion to it. Most people don't sit on the floor when they find themselves in a room that appears to be arranged formally. Most people don't remain standing when they are at the beach. But, most people don't ask others about such things. They simply do, or don't do, them in certain ways because this is what they have come to expect. They are following norms.

Norms exert a powerful influence on what most of us communicate under certain circumstances to whom, when and in what ways. Such influences are seldom looked at. It's even more rare that we attempt to change norms to better suit our needs and desires. Normally we simply live with them. Yet norms have far reaching impacts. To illustrate, what norms have developed in your small group which is meeting at the moment about who sits where? If you have fallen into a clear pattern of certain people sitting next to certain others, how has this affected who talks to whom about what? If the pattern has been one of shifting seating arrangements, what effect has this had on informal exchanges–on who asks who for clarification, help or ideas.

In your group discuss what norms have developed about seating, if any, and how this may be affecting communications. If no norms about seating seem clear, discuss why they may not have evolved (since they tend to form rapidly in groups) and how your communications are being affected. Continue to discuss other kinds of norms you can see that your group has formed concerning communications such as:

When you have been asked to discuss things as a small group how does the discussion usually start out?

How are boredom or frustration generally expressed, if at all?

If the norm is that boredom or frustration are almost never expressed in the group, why is this so?

Most groups develop norms about things they "do" and "don't" talk about. What topics are "do's" and "don'ts" in your group?

Some groups tend to have an intensive climate where people are frequently on the "edge of their chairs." Others are low key. Still others have a pattern of sharp ups and downs of intensity. What is the norm in your group and why?

What other norms have developed in your group?

NORMS

Step 2:	**SMALL-GROUP DISCUSSIONS**
Allow:	**30 minutes**
Materials:	**None**

How to Proceed:	**Have participants form small groups.**

Instructions to Participants (in your own words):

Discuss the questions at the end of Handout #8.

Objectives:

To relate the theory input on norms to the norms being developed by the participants in the group, and to the implication of these norms for communication.

NORMS

Step 3:	**REACTION SHEET**
Allow:	**5 minutes**
Materials:	**Handout #9 (p. 14)** **pencils**
How to Proceed:	**Distribute materials among participants.**

Instructions to Participants (in your own words):

Read Handout #9 and respond to the questions.

Objectives:

To help participants become more aware of their involvement and the involvement of others in the group discussion.

HANDOUT #9: Reaction Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

During the discussion which your group just held, there were probably many times that you felt positive or negative reactions to ideas or things that were happening. You might have shared some of your reactions. You might, for example, have said things like, "I agree," "Good," or "I see it differently." On other occasions you might have reacted by smiling, nodding, shuffling your feet or yawning. You probably had many reactions that you did not share at all. It would not necessarily be helpful, or even possible, for each person to share every single reaction during a group discussion. Some of us undoubtedly share more often than others.

1. How often have you shared your reactions?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

2. How often did others generally share their reactions in the group?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

3. You may wish you had shared your reactions more or less frequently. How often would you have liked to share your reactions?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

4. How often do you think that others want reactions to be shared in the group?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

NORMS

Step 4: **TALLYING**

Allow: **10 minutes**

Materials: **Handout #9 (p. 14)**
chart paper
magic markers
masking tape

How to Proceed: **(see instructions to participants)**

Instructions to Participants (in your own words):

Each group is to appoint a recorder who will copy the four scales from Handout #9 and then record the responses from each group member for each of the scales.*

Objectives:

To permit individuals to compare their responses with those of the group.

***The questions in Handout #9 may be repeated throughout the workshop, to note change .**

NORMS

Step 5:	**NORM REFLECTION SHEET**
Allow:	**10 minutes**
Materials:	**Handout #10 (p. 20)**

How to Proceed:	**Distribute Handout #10 among participants.**

Instructions to Participants (in your own words):

Read Handout #10 and reflect on the questions.

Objectives:

To relate the discussion of norms to the classroom and faculty group--the "back-home" setting.

HANDOUT #10: Norms within the Classroom

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

A research study found that in the average elementary school classroom most children are less active in collaborating with the teacher to learn than they privately would like to be. Most children think, wrongly, that the others don't want to be more active in collaborating with the teacher. Most children actually collaborate with the teacher at the lowest level which they believe most of the other children desire!

What do you think are the major norms operating in your classroom and your faculty group at home? Which of these would be the most important to check out? Discuss this in your small group.

— Charles C. Jung

NORMS

Step 6:	**SMALL-GROUP DISCUSSION**
Allow:	25 minutes
Materials:	Handout #10 (p. 20) chart paper magic markers masking tape
How to Proceed:	Relate the discussion of classroom norms specifically to the change in pupil-teacher roles required by the *Man: A Course of Study* (MACOS) program.

Instructions to Participants (in your own words):

Each group is to appoint a recorder, to record responses of group members as they discuss Handout #10.

Objectives:

To relate the discussion of norms to the classroom and faculty group—the "back-home" setting.

NORMS

Step 7:	**WORKSHOP NORMS**
Allow:	25 minutes
Materials:	chart paper magic markers masking tape
How to Proceed:	Have participants come together into one large group.

Instructions to Participants (in your own words):

Talk about the norms being established here in the workshop and the implications of these norms.

Compare the workshop norms with those "back-home".

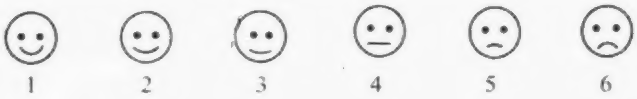
Objectives:

To relate the discussion of norms to the workshop situation.

FEEDBACK

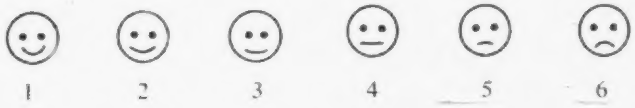
NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. How did you feel about the inclusion of norms as a workshop topic?



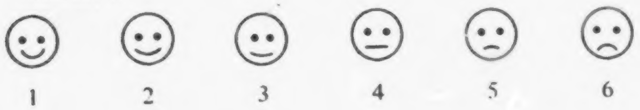
Why?

2. How did you feel about relating the discussion of norms to the "back-home" situation?



Why?

3. How did you feel about relating the discussion of norms to the workshop situation?



Why?

4. Rate your understanding of how norms are established and how they function in a group.

1	2	3	4	5	6
don't understand at all					completely understand all aspects

Why did you give yourself this rating?

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PROCESS EDUCATION FOR TEACHERS

MODULE 4

PROBLEM-SOLVING SEQUENCE

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for materials used in conjunction with this module

Microlab in Inquiry from Emily Girault and Robert Fox, "Inservice Workshop in Inquiry Teaching for Social Studies Teachers" (Wabash Valley Education Center, Lafayette, Ind.)

Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.), *Man: A Course of Study*, Teacher Guide, Book 3, and Animal Studies Booklets (disseminated by Curriculum Development Associates, Washington, D. C.)

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RATIONALE

The *Man: A Course of Study* (MACOS) curriculum was specifically designed to engage the learner actively in exploring questions of interest to him. In other words, the learner is encouraged to become a social science investigator or inquirer.

This module was designed to present one method, or sequence, which can be used to explore such questions. By having groups employ this sequence, the consequences of slightly different approaches to each step become evident, and the groups can together discuss how a variety of approaches or different perspectives can jointly enrich and clarify a question. The rationale for and value of the various types of activity in the problem-solving sequence for example, brainstorming, hypothesis selection are also topics for group discussion.

OBJECTIVES

To give participants a method of data collecting, organization, and utilization.

To make inferences from data and practice group skills.

To develop inference and interpretation skills.

To provide experience and practice with social science investigation.

To utilize MACOS content as a springboard for social science investigation.

TO PREPARE FOR THIS MODULE

ASSEMBLE these materials:

- life ropes (those constructed earlier)
- chart paper
- magic markers
- masking tape

PREPARE a blank outline of a Life Cycle Variables Chart (see MACOS, Teacher Guide, Book 3, Lesson D) on newsprint, blackboard, or overhead projector.

PREPARE individual blank outline charts for participants.

HAVE on hand multiple copies of these MACOS booklets:

Salmon

Life Cycle

The Brown Rat

The Chimpanzee

The Wolf

The African Elephant

The Bottlenose Porpoise

The Grizzly Bear

The Gnu

PROBLEM-SOLVING SEQUENCE

Step 1: REVIEW OF LIFE CYCLE CONCEPT

Allow: 2-3 minutes

Materials: life ropes
booklets: *Salmon*
Life Cycle

How to Proceed: Emphasize the concept of the life cycle as being the key to the course. The transition is to be made from thinking about an individual lifetime to thinking about an entire species.

Instructions to Participants (in your own words):

We have already discussed the concept of the life cycle. Now explain and illustrate what the term "life cycle" means.

Objectives:

To illustrate and reinforce a key MACOS concept.

PROBLEM-SOLVING SEQUENCE

Step 2: **INTRODUCTION OF LIFE CYCLE VARIABLES CHART**

Allow: **15 minutes**

Materials: **booklets: *Salmon***
Life Cycle
blank outline of Life Cycle Variables Chart
individual blank outline charts for participants

How to Proceed: **With participation of the entire group, fill in the Life Cycle Variables Chart for Man and Salmon, so that procedures are clearly understood by all. Encourage questions and discussion to show that the chart is data-based, although not encyclopedic and final.**

Do not force participants to accept the answers given on the chart in the Teacher Guide.

Instructions to Participants (in your own words):

Let's fill in the Man and Salmon columns on the chart together.

Objectives:

To provide a method of data collection, organization, and utilization.

PROBLEM-SOLVING SEQUENCE

Step 3:	**GROUP EXTENSION OF LIFE CYCLE VARIABLES CHART**
Allow:	**40 minutes**
Materials:	**copies of MACOS booklets:** ***The Brown Rat*** ***The Chimpanzee*** ***The Wolf*** ***The African Elephant*** ***The Bottlenose Porpoise*** ***The Grizzly Bear*** ***The Gnu*** **Life Cycle Variables Chart**
How to Proceed:	**Divide the group into pairs. Give each pair copies of two or three of the Animal Studies Booklets. Be sure that at least two groups have the same animal.**

Instructions to Participants (in your own words):

Each pair is to fill out the chart, using information from the booklets.

Objectives:

To use course materials to collect, analyze, and apply data.

To make inferences from data.

To practice group skills.

PROBLEM-SOLVING SEQUENCE

Step 4: **COMPLETION OF LIFE CYCLE VARIABLES CHART**

Allow: **15-20 minutes**

Materials: **Life Cycle Variables Chart**

How to Proceed: **Fill out the large prepared chart for each of the animals in the booklets.**

Try to identify the problems of differences in data interpretation. (The point here is not to seek "the" answer, but to discover that diverse "answers" may be obtained from the same information.)

Instructions to Participants (in your own words):

Read the necessary data aloud so that we can fill out the chart on each of the animals.

Objectives:

To gain skill in problem-solving, inference, and interpretation.

To understand that different responses can come from different data interpretations.

PROBLEM-SOLVING SEQUENCE

Step 5: **PROBLEM-SOLVING SEQUENCE: INTRODUCTION**

Allow: **3 minutes**

Materials:
chart paper
magic markers
masking tape

How to Proceed: **Divide participants into equal groups.**

Instructions to Participants (in your own words):

Each group is to record on chart paper the results from each of the steps in the problem-solving sequence which follows. Each group should appoint a recorder for this purpose.

Use the problem-solving sequence to answer this question: What similarities in life cycle variables do you see between man and all the species (collectively) on the chart?

Objectives:

To provide experience and practice with social science investigation.

To utilize MACOS content as a springboard for social science investigation.

PROBLEM-SOLVING SEQUENCE

Step 6:	**BRAINSTORMING**
Allow:	**8-10 minutes**
Materials:	**Life Cycle Variables Chart**
How to Proceed:	**Workshop leaders must monitor group activity, to be certain that rules for each round are being observed and that directions are clearly understood.**

Instructions to Participants

Generate as many ideas as
posed in Step 5.

Do not communicate any
ideas expressed.

Objectives:

To provide experience and

To utilize MACOS content
investigation.

s (in your own words):

s you can in response to the question

judgment or evaluation of any of the

practice with social science investigation.

as a springboard for social science

PROBLEM-SOLVING SEQUENCE

Step 7: **HYPOTHESIS SELECTION**

Allow: **10-15 minutes**

Materials: **brainstorming lists**

How to Proceed: **Workshop leaders continue to monitor group activity.**

Instructions to Participant

Review your brainstormin
lap. Eliminate "long shots

Compare the feasibility of
most feasible ideas.

Objectives:

To provide experience and

To utilize MACOS conten
investigation.

s (in your own words):

g list. Eliminate any repetitions or over-
” and improbable ideas.

the ideas that remain. Select the three

l practice with social science investigation.

t as a springboard for social science

PROBLEM-SOLVING SEQUENCE

Step 8: **EVIDENCE SEARCH**

Allow: **8-10 minutes**

Materials: **ideas from hypothesis selection**

How to Proceed: **Workshop leaders continue to monitor group activity.**

Instructions to Participants (in your own words):

Think together about the evidence supporting each of the three hypotheses selected by your group. Specifically, answer this question: What is the strongest evidence we can find to support our hypotheses?

Use your listening skills—for example, paraphrasing (introduced in Module 1).

Objectives:

To provide experience and practice with social science investigation.

To utilize MACOS content as a springboard for social science investigation.

PROBLEM-SOLVING SEQUENCE

Step 9: **HYPOTHESIS TESTING**

Allow: **5-8 minutes**

Materials: **ideas from hypothesis selection**

How to Proceed: **Workshop leaders continue to monitor group activity.**

Instructions to Participants (in your own words):

Arrive at a group consensus; agree on one hypothesis.

Arrive on the most promising ways to test this hypothesis. Deci
on several action steps that might be taken to determine the validity of this hypothesis.

Objectives:

To provide experience and practice with social science investig

To utilize MACOS content as a springboard for social science investigation.

de

ation.

PROBLEM-SOLVING SEQUENCE

Step 10: **GROUP DISCUSSION**

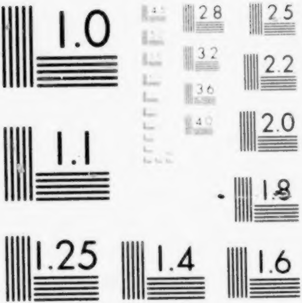
Allow: **15-20 minutes**

Materials: **charts generated during each of the four phases of the problem-solving sequence.**

How to Proceed: **Bring the entire group together for discussion.**

Emphasize the purpose of collecting data—namely, for drawing inferences and forming hypotheses.

Be sure the answers you get, when you ask for inferences, are data-based and not merely guesses.


1.0
4.5
2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Instructions to Participants (in your own words):

Our discussion will focus on the charts generated by each small group during the problem-solving sequence. We need to relate the charts to the group process and to the processes involved in the problem-solving sequence as well as to a basic MACOS theme.

Objectives:

To provide experience and practice with social science investigation.

To utilize MACOS content as a springboard for social science investigation.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. How helpful do you feel the problem-solving sequence would be in stimulating inquiry using MACOS content?

1	2	3	4	5	6
not at all helpful					extremely helpful

Why or why not?

2. What is the likelihood of your using the problem-solving sequence as a classroom activity with MACOS?

1	2	3	4	5	6
not at all likely					extremely likely

Why or why not?

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PROCESS EDUCATION FOR TEACHERS

MODULE 5

NONVERBAL COMMUNICATION

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Instructions to Participants (in your own words):

What kinds of things can baboons communicate vocally? What limitations do baboons have in communication?

Objectives:

To identify and relate the concept of nonverbal communication to a non-human setting.

NONVERBAL COMMUNICATION

Step 5:	**"IN THE FIELD" BABOON SOUNDS BAND OF RECORD**
Allow:	8-10 minutes
Materials:	record (MACOS) record player

How to Proceed: Have participants listen to record.

Instructions to Participants (in your own words):

None

Objectives:

To reinforce the skills of observation and data-collecting.

CREDITS AND ACKNOWLEDGMENTS
for materials used in conjunction
with this module

J. William Pfeiffer and John E. Jones, *A Handbook of Structured Experience for Human Relations Training,* Vol. II (University Associates Press, P.O. Box 615, Iowa City, Iowa 52240): "Hand Talk Exercise," p. 102; "Progression Exercise," p. 109; "Nonverbal Techniques," p. 102

Northwest Regional Education Laboratory (Portland, Ore.), "Nonverbal Behavior," "How Do You Express Your Feelings?," "Observation Guide: Perception Checking, Observation of Nonverbal Communication," "Description of Feelings" from Interpersonal Communications Package (published by XICOM Inc., Tuxedo, N.Y.)

Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.), *Man: A Course of Study, Baboon Communication* (booklet), "Animals of the Amboseli" (film), "In the Field" (record) (disseminated by Curriculum Development Associates, Washington, D.C.)

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Instructions to Participants: (in your own words):

What is the difference between language and communication? Relate your answers to the record we have just heard.

Objectives:

To promote: group interaction skills, data gathering, data interpretation, data generation, decision making, comprehension, and interpretation.

RATIONALE

An important aspect of all interpersonal communication is that which we term nonverbal. Though we generally verbalize the importance of nonverbal communication, and though we continuously engage in nonverbal communication, we are unaware of the many facets or skills of nonverbal communication.

This module was designed to increase awareness of the skills of nonverbal communication. It involves learning ways to recognize and identify aspects of nonverbal communication; practicing the expression of feelings nonverbally; giving and receiving feedback about nonverbal behavior; and becoming more aware of one's personal style in communicating.

The module is also concerned with making the necessary distinction between "communication" and "language." All animals communicate, but it is man's unique distinction to be able to use language—to name things past, present, and future—and this sets him apart from all other animals.

OBJECTIVES

To have participants become more aware of the aspects of nonverbal communication and of their impact on communication.

To increase ability to identify nonverbal behavior.

To provide opportunity to practice nonverbal communication of feelings.

To practice giving and receiving feedback about one's own style of nonverbal communication.

To generate ideas about the implications of nonverbal communication in the classroom.

To compare and contrast man's communication system with that of baboons.

TO PREPARE FOR THIS MODULE:

ASSESS participants' readiness for this activity. Read the Special Procedures (p. 5).

NOTIFY participants of this activity a day in advance so that appropriate clothing (for sitting on the floor) may be worn.

A large uncluttered area, such as a gym, is needed.

PREVIEW the film.
SET UP projector and make sure it is functioning properly.

LISTEN to the "In the Field" record (baboon sounds band).
SET UP record player and check functioning.

HAVE copies on hand for distribution to participants of the MACOS booklet *Baboon Communication.*

ASSEMBLE these materials:

paper
paste
scissors
pencils
other art supplies
crayons

READ Handouts #11 (pp. 30-31), #12 (pp. 34-36), #13 (pp. 40-41), and #14 (pp. 46-47).

PREPARE these handouts for distribution to participants.

SPECIAL PROCEDURES

"Numerous devices have evolved in human relations training to supplement and enhance learning that is the result of verbal interaction. Nonverbal techniques (NVT's) have become popular with both facilitators and laboratory participants. As Mill and Ritvo* point out, however, the potentialities in using NVT's may be counterbalanced by a number of pitfalls. They suggest as guidelines three questions which the facilitator should be able to answer with 'some sophistication'

1. How does your selection and use of an NVT fit into your understanding of the way people change (learning theory)?
2. What position does this NVT hold in the context of the laboratory goals toward which you are working (training design)?
3. What immediate and observable needs at this time with these participants does this NVT meet (specific relevance)?

Pfeiffer, J. and J. Jones, *A Handbook of Structured Experience for Human Relations Training*, Vol. II (University Associates Press, Iowa City, Iowa), p. 102.

***Cyril Mill and Miriam Ritvo, *"Potentialities and Pitfalls of Nonverbal Techniques," Human Relations Training News,* 1969 (13[1]), 1-3.**

NONVERBAL COMMUNICATION

Step 1:	**INTRODUCTION APPLYING NONVERBAL COMMUNICATION TO ANIMALS**
Allow:	**2-4 minutes**
Materials:	**None**
How to Proceed:	**Set the stage for the topic, introducing the film.**

Instructions to Participants (in your own words):

In the film look for examples of animal communication. If you see instances of communication, how is it taking place?

Objectives:

To identify and relate the concept of nonverbal communication to a non-human setting.

Instructions to Participants (in your own words):

Determine how you wish to illustrate the concept assigned to you, using the art media available.

Objectives:

To increase awareness of how one can communicate nonverbally.

NONVERBAL COMMUNICATION

Step 2:	"ANIMALS OF THE AMBOSELI" NATURAL SOUND FILM OF THE EAST AFRICAN SAVANNA
Allow:	30 minutes
Materials:	film (MACOS) projector
How to Proceed:	Show film to participants.

Instructions to Participants (in your own words):

None

Objectives:

To reinforce the skills of observation and data-collecting.

NONVERBAL COMMUNICATION

Step 3: DISCUSSION
FOLLOW-UP AND REVIEW OF FILM

Allow: 10-15 minutes

Materials: None

How to Proceed: Form small discussion groups to review data. End with a brief large-group sharing period.

Instructions to Participants (in your own words):
What responses does your group have to the questions in Step 1? Remember to support your findings with descriptive data.

Objectives:
To promote: group interaction skills, data gathering, data interpretation, data-generation, decision-making.

NONVERBAL COMMUNICATION

Step 4: **INTRODUCTION OF " IN THE FIELD " RECORD (BABOON SOUNDS BAND)**

Allow: **2-3 minutes**

Materials: **None**

How to Proceed: **Provide reinforcement through the use of more data via another medium.**

NONVERBAL COMMUNICATION

Step 10: HAND TALK EXERCISE

Allow: 16 minutes

Materials: None

How to Proceed: Pair participants.

Have pairs face each other, with eyes closed.

Announce that members of the pairs should take turns attempting to communicate nonverbally such feelings as frustration, tension, joy, friendliness, anger, hate, elation, ecstasy.

Instructions to Participants (in your own words):
None

Objectives:
To provide practice in expressing specific feelings nonverbally.

To increase awareness of multiple ways in which a specific feeling can be expressed nonverbally.

NONVERBAL COMMUNICATION

Step 11: ANALYSIS OF NONVERBAL
PROCESS BY THE GROUP

Allow: 25-30 minutes

Materials: None

How to Proceed: The discussion should be as open-ended as possible, with participants contributing what they wish about data that were generated and observed.

Instructions to Participants (in your own words):
Read the handout and respond to the questions in writing.

Objectives:
To examine different ways an individual expresses feelings.

HANDOUT #13: How Do You Express Your Feelings?

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Do these five exercises individually. When everyone has finished, discuss the different possibilities that the group members have written down. If you have any questions refer back to the paper on *Description of Feelings.*

Below are some feelings you may have experienced. For each of these you are to report two different ways that you express such feelings.

The first answer should be some way that would *express but not describe* your feelings. The second answer should report how you might express such feelings by actions without using words.

1. When you feel bored with what is going on in a group, how does your feeling usually express itself?
   In words?
   Without words?
2. When you feel very annoyed with another staff member, but reluctant to say so openly, how does your feeling usually express itself?
   In words?
   Without words?
3. Another person says or does something to you that deeply hurts your feelings, how does your feeling usually express itself?
   In words?
   Without words?
4. Another person asks you to do something that you are afraid you cannot do very well. You also do not wish him to know that you feel inadequate. How do your feelings express themselves?
   In words?
   Without words?

---

5. When you feel fondness and affection for another person and at the same time are not sure that the other feels the same toward you, how does your feeling usually express itself?
   In words?
   Without words?

John Wallen

TO PREPARE FOR THIS MODULE

READ the Special Procedures Section (pp. 22-24). Construct charts according to these directions.

PREVIEW the two films.
SET UP projector and make sure it is functioning properly.

READ Handouts #15 (p. 18), #16 (pp. 28-29), #17 (pp. 32-33), #18 (p. 36), #19 (p. 40), and #20 (p. 41).
PREPARE these handouts for distribution to participants.

HAVE on hand copies for distribution of the MACOS booklets *Baboon Troop* and Irven DeVore's *Field Notes.*

ASSEMBLE these materials:
- heavy cardboard (for environment boards)
- cutouts of baboons
- scissors
- tape
- colored paper
- cardboard
- cotton
- pipe cleaners
- paste
- pencils
- pens

READ MACOS Teacher Guide, Book 5, Lessons A-F.

SOCIAL ORGANIZATION

Step 1: INTRODUCTION
EVIDENCE OF SOCIAL
ORGANIZATION AMONG
HIGHER-ORDER ANIMALS

Allow: 10 minutes

Materials: MACOS booklet, *Baboon Troop*, distributed among participants

How to Proceed: In groups, participants peruse the booklet, keeping in mind the question: what is the social organization of baboons? Suggest that participants look for evidence to support or refute information given in the booklet. Indicate that the film (to be shown in Step 2) will be another source for the topic under study.

Instructions to Participants (in your own words):

Form small groups. Read the booklet. What is the social organization of baboons?

(At end of period) alert participants to watch for specific incidents in the film to be shown that demonstrate social behavior and organization. Make a list of these.

Objectives:

To introduce the social organization of a primate group.

To make hypotheses from data in the *Baboon Troop* book.

To reinforce course themes and their utilization.

Instructions to Participants (in your own words):

None

Objectives:

To reinforce the skills of observation and data-collecting.

NONVERBAL COMMUNICATION

Step 6:	**DISCUSSION OF RECORD**
Allow:	**8-10 minutes**
Materials:	**None**
How to Proceed:	**Develop data-based answers to the questions in Step 4. Be sure to emphasize the range—and at the same time the limitations—of the baboon closed-communication system.**

NONVERBAL COMMUNICATION

Step 7:	**TOPIC REVIEW**
Allow:	**15-20 minutes**
Materials:	**MACOS booklet *Baboon Communication***

How to Proceed:

Review the learning outcomes of Steps 1-4.

Distribute and read the booklet *Baboon Communication*.

Through discussion, interrelate findings [illegible] the several sources: film, record, [illegible] booklet. Discuss the differences and [illegible] between language and communication.

Develop some key questions to lead the discussion.

Instructions to Participants (in your own words):

What are the major distinctions between language and communication? (plus other questions you develop)

Objectives:

To promote: group interaction skills, data gathering, data interpretation, data-generation, decision-making.

To practice cognitive skills of analysis and synthesis.

To distinguish between communication and language.

NONVERBAL COMMUNICATION

Step 8:	ILLUSTRATION IN ART FORM OF THE CONCEPTS AGGRESSION, BELONGING, GROWING, BIRTH, BROTHERHOOD
Allow:	30 minutes
Materials:	paper paste scissors crayons other art supplies
How to Proceed:	Have participants form groups of four. Assign concepts at random. Do not share the concepts.

NONVERBAL COMMUNICATION

Step 9:	**PROGRESSION EXERCISE**
Allow:	6-9 minutes
Materials:	None

How to Proceed:

Pair participants.

Give directions for the exercise. Have partners sit facing each other and share their feelings verbally.

After 2-3 minutes, have them sit back to back and continue sharing verbally.

After another 2-3 minutes, have them again sit face to face and communicate without using words.

Instructions to Participants (in your own words):

None

Objectives:

To increase awareness of our reliance on nonverbal cues.

To provide practice in nonverbal communication.

Instructions to Participants (in your own words):

None

Objectives:

To share reactions to the experiences of the nonverbal exercises.

To generate ideas concerning the implications of nonverbal behavior for the classroom.

NONVERBAL COMMUNICATION

Step 12:	**"NONVERBAL BEHAVIOR" (READING)**
Allow:	**5 minutes**
Materials:	**Handout #11 (pp. 30-31)**
How to Proceed:	**Distribute and have participants read the handout.**

Instructions to Participants (in your own words):

None

Objectives:

To identify skills in dealing with nonverbal behavior.

HANDOUT #11: Nonverbal Behavior

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

The Problem

Much is communicated by the words we use and the emphasis, or inflection, we give them. We also communicate in nonverbal ways such as frowning, crossing our arms, looking at the floor as we speak, blushing, looking at the clock or beckoning with a hand. Some nonverbal behaviors convey an idea such as putting a finger to your lips in a gesture of silence. Some indicate feelings such as smiling or pounding your fist on a desk.

Nonverbal behavior is often more spontaneous than the words we use. It can therefore present a clearer picture of the meaning which the speaker intends to communicate than his words alone. There is a potential problem however. *Unless we use the skill of perception check, we may sometimes be interpreting the other person's nonverbal cues incorrectly.* We may think a person has closed his eyes because he is bored, when actually he closed them so as to concentrate better or listen to what is being said. It's important to be sure we know the correct meaning of the nonverbal behavior when it influences us in the communication.

Another possible problem can arise when *you* communicate things nonverbally that you are unaware of. You probably use many spontaneous nonverbal mannerisms that you are unaware of. These are part of your personal style of interpersonal communications. Some of these mannerisms may have obvious meaning to others. Some mannerisms you use may only be correctly understood by those who know you well. They may cause frequent confusion or misunderstanding for those who do not know you well. It can be important to become aware of the nonverbal mannerisms which are part of your style. You can then use them in a way that matches what you are saying. You can then also help others to learn what they mean as part of your personal, individual style of communicating. For example, you might find it is helpful to tell others, "People sometimes think I'm doubting them when they see me raise my eyebrows. That's generally not the case for me. I have a habit of raising my eyebrows when I hear something that especially interests me."

The Skills

Three skills can help improve that part of interpersonal communication which is nonverbal. The first is the skill of *"perception check."* If you feel a person's nonverbal behavior is influencing your reaction to the person you are communicating with, you may be wise to check whether you have a correct understanding of that behavior.

The second skill is to recognize your own nonverbal behaviors. This is a difficult thing to learn. Few people have experience with observing themselves as they communicate. One way to do it is to use films or television tapes. An opportunity to use such expensive equipment to "see ourselves as others see us" can be revealing and extremely helpful. Another way to get such "feedback" is to ask others to watch you and describe your behaviors to you. You can learn to watch for clues that you may be communicating meanings nonverbally that are causing problems. If you suspect this is happening, it can sometimes help to suggest that the other person share his perception of how you are reacting. Getting *him* to use "perception check" may lead to a needed clarification as well as provide "feedback" to you about nonverbal behavior you were unaware of.

The third skill involves giving and receiving "feedback," i.e. sharing impressions and reactions of the other persons behavior. Two especially important ones for clarifying meanings of nonverbal behavior are "paraphrasing" to be sure you understand what the other is seeing of you and being specific in asking him to observe your nonverbal mannerisms. Examples of being specific would be to say,

> "Watch and tell me after the meeting whether there are times you think I appeared to be bored."
>
> or
>
> "Have I been doing anything as you spoke that indicated times I agreed or disagreed with your ideas?"

NONVERBAL COMMUNICATION

Step 13:	"DESCRIPTION OF FEELINGS" (READING)
Allow:	10 minutes
Materials:	Handout #12 (pp. 34-36)

How to Proceed:	Distribute and have participants read the handout.

Instructions to Parti

None

Objectives:

To differentiate bet

icipants (in your own words):

ween expressing and describing feeling.

HANDOUT #12: Description of Feelings: A Basic Communication Skill for Improving Interpersonal Relationships

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

The Problem

To communicate your own feelings accurately or to understand those of others is difficult.

First, expressions of emotion take many different forms. Feelings can express themselves in bodily changes, in action, and in words.

Second, any specific expression of feeling may come from very different feelings. A blush, for example, may indicate the person is feeling pleased, but it may also indicate that he feels annoyed, or embarrassed or uneasy.

Likewise, a specific feeling does not always get expressed in the same way. For example, a child's feeling of affection for his teacher may lead him to blush when she stands near his desk, to touch her as he passes her, to watch her as she walks around the room, to tell her "You're nice," to bring his pet turtle to show her, etc.; different forms of expression indicate the child's feeling of affection.

Communication of feelings, thus, is often inaccurate or even misleading. What looks like an expression of anger, for example, often turns out to result from hurt feelings or from fear.

A further obstacle to the accurate communication of feelings is that your perception of what another is feeling is based on so many different kinds of information. When somebody speaks, you notice more than just the words he says. You note his gestures, voice tone, posture, facial expression, etc. In addition, you are aware of the immediate present situation–the context in which the interaction is occurring. You are aware of whether somebody is watching, for example. Therefore, you make assumptions about how the situation influences what the other is feeling. Beyond all of this you also have expectations based on your past experiences with the other individual.

You make inferences from all of this information–words, nonverbal cues, the situational context, your expectations of the other. These inferences are influenced by your own current emotional state. What you perceive the other to be feeling, then, often depends more upon what you are feeling than upon the other person's actions or words. For example, if you are feeling guilty about something, you may perceive others as angry with you. If you are feeling depressed and discouraged about yourself, others may seem to be expressing disapproval of you.

Communicating your own and understanding the feelings of others is an extremely difficult task. And, yet, if you wish others to respond to you as a person, you must help them understand how you feel. Likewise, if you are concerned about the other as a person and about your relationship with him, you must try to understand his emotional reactions.

The Skill

Although we usually try to describe our *ideas* clearly and accurately, we often do not try to describe our *feelings* clearly. Feelings get expressed in many different ways, but we do not usually attempt to identify the feeling itself.

One way to describe a feeling is to identify or name it. "I feel angry." "I feel embarrassed." "I feel comfortable with you." However, we do not have enough names or labels to encompass the broad range of human emotions, and so we invent other ways to describe our feelings, such as the use of similes. "I feel like a tiny frog in a huge pond." A girl, whose friendly overture had just been rebuffed, said, "I feel like I have just had an arm amputated."

A third way to describe a feeling is to report what kind of action the feeling urges you to do. "I feel like hugging and hugging you." "I'd like to slap you." "I wish I could walk off and leave you."

In addition, many figures of speech serve as descriptions of feeling. "I just swallowed a bushel of spring sunshine."

Describing Your Own Feelings

When describing your feelings you try to make clear what feelings you are experiencing by identifying them. The statement must (1) refer to "I," "me," or "my," and (2) specify some kind of feeling by name, simile, action urge or other figure of speech.

The following examples show the relation between two kinds of expressions of feeling, (1) those that describe what the speaker is feeling, and (2) those that do not. Notice that expressions of feeling which describe the speaker's emotional state are more precise, less capable of misinterpretation, and, thus, convey more accurately what feelings are affecting the speaker.

Expressing feeling by describing your emotional state	*Expressing feeling without describing your emotional state*
"I feel embarrassed." "I feel pleased." "I feel annoyed."	Blushing and say nothing.
"I feel angry!" "I'm worried about this." "I feel hurt by what you said."	Suddenly becoming silent in the midst of a conversation.
"I enjoy her sense of humor." "I respect her abilities and competence." "I love her but I feel I shouldn't say so."	"She's a wonderful person."
"I hurt too much to hear any more." "I feel angry at myself." "I'm angry with you."	"Shut up!!!"

Because emotional states express themselves simultaneously in words, in actions and in physiological changes, a person may convey contradictory messages about what he is feeling. For example, his actions (a smile or laugh) may contradict his words (that he is angry). The clearest emotional communication occurs when the speaker's description of what he is feeling matches and, thus, amplifies what is being conveyed by his actions and other nonverbal expressions of feeling.

The aim in describing your own feelings is to start a dialogue that will improve your relationship with the other. After all, others need to know how you feel if they are to take your feelings into account. Negative feelings are indicator signals that something may be going wrong in a relationship with another person. To ignore negative feelings is like ignoring a warning light that indicates an electrical circuit is overloaded. Negative feelings are a signal that the two of you need to check for misunderstanding and faulty communication.

After discussing how each sees the situation or your relationship, you may discover that your feelings resulted from false perceptions of the situation and of his motives. In this case, your feelings would probably change. However, the other may discover that his actions are arousing feelings in you that he wasn't aware of—feelings that others beside you might experience in response to his behavior—and *he* may change.

In short, describing your feelings should not be an effort to coerce the other into changing so that you won't feel as you do. Rather you report your inner state as just one more piece of information that is necessary if the two of you are to understand and improve your relationship.

Perception Check

You describe what you perceive to be the other's inner state in order to check whether you understand what he feels. That is, you test to see whether you have decoded his expressions of feeling accurately. You transform his *expressions* of feeling into a tentative *description* of his feeling. A good perception check conveys this message, "I want to understand your feelings—is this (making a description of his feelings) the way you feel?"

Examples:

> "I get the impression you are angry with me. Are you?"
> (NOT: "Why are you so angry with me?" This is mind reading, not perception checking.)
>
> "Am I right that you feel disappointed that nobody commented on your suggestion?"
>
> "I'm not sure whether your expression means that my comment hurt your feelings, irritated you or confused you."

Note that a perception check *describes* the other's feelings, and *does not express disapproval or approval.* It merely conveys, "This is how I understand your feelings. Am I accurate?"

John L. Wallen

NONVERBAL COMMUNICATION

Step 14: **"HOW DO YOU EXPRESS YOUR FEELINGS?" (READING)**

Allow: **5 minutes**

Materials: **Handout #13 (pp. 40-41)**
pencils

How to Proceed: **Distribute and have participants read the handout. Distribute pencils.**

NONVERBAL COMMUNICATION

Step 15: SHARING OF RESPONSES

Allow: 20 minutes

Materials: Handout #13 (pp. 40-41)

How to Proceed: Have participants form discussion groups of two, then four.

Instructions to Participants (in your own words):
Talk over your responses to the questions in Handout #13.

Objectives:
To become more aware of each other's communication style, as team members and as work group members.

SOCIAL ORGANIZATION

Step 2: "BABOON TROOP" (FILM) ILLUSTRATION OF THE SOCIAL ORGANIZATION OF A BABOON TROOP

Allow: 30 minutes

Materials: film (MACOS)
projector

How to Proceed: Show film to participants.

Instructions to Participants (in your own words):
(See Step 1, Instructions to Participants).

Objectives:

To encourage data collection and observation.

To illustrate the concept of social organization by focusing on the role and behavior of members of the group.

To foster speculation and hypothesis formation.

Individual Ident. Score (Red)		Average Individual (Green)	Group Score (Orange)	Self-Rank Correctness (Red)	Others-Rank Correctness (Black)						Self-Rank Participation (Red)	Others-Rank Participation (Black)					
A																	
B																	
C																	
D																	
E																	
F																	

Individual Ident. Score (Red)		Average Individual (Green)	Group Score (Orange)	Self-Rank Correctness (Red)	Others-Rank Correctness (Black)						Self-Rank Participation (Red)	Others-Rank Participation (Black)					
A	58	40	22	4	4	3	4	2	2	3	3	3	4	4	3	4	6
B	44	40	22	6	2	4	3	4	6	5	2	2	2	3	2	2	1
C	26	40	22	2	6	2	1	1	1	2	1	4	1	1	1	1	5
D	48	40	22	5	3	6	5	3	5	4	5	5	5	5	4	5	3
E	36	40	22	5	1	5	2	5	3	1	5	1	6	2	5	3	2
F	28	40	22	6	5	1	6	6	4	6	4	6	3	6	6	6	4

DISCUSSION QUESTIONS

1. What can we say based on data generated in these groups? What inferences can we make?
2. What are some factors that might account for discrepancy between an individual's self-ranking for correct answers and others' ranking of him?

SPECIAL PROCEDURES FOR NASA SIMULATION: cont.

3. What are some factors that might account for discrepancy between an individual's self-ranking for participation and others' ranking of him?
4. On what basis did you do "correct answer" ranking?
5. On what basis did you do "participation" ranking?
6. What does it mean to you to be an effective group member?
7. What are some factors that help an individual who "has the answer" to influence the opinions of others?
8. Does group interaction help? (Compare average individual score and group score.)
9. What was dominance in your group?
10. How was it established?
11. How did dominance make you feel?
12. Were you conscious of ascribing less status to the females in your group? If you were a female, did you feel that you had less status, fate control, influence? What does this say about expectations for females?
13. How did you feel when attacked? What adaptive strategies did you employ?
14. Was there a coalition among the dominant in your group?
15. Did one leader succeed another? Was anyone overthrown?
16. Were you conscious of nonverbal cues of support or rejection?
17. Were you conscious of incongruity between verbal and nonverbal communication? Contrast this with baboons.
18. Why not take a majority vote? What's the difference between this and consensus?
19. If you are accustomed to being a leader and having considerable fate control–how do you react to the loss of leadership?
20. Do you feel that you ascribe status based on physical characteristics: "He looks like an authority (strong man). She looks weak."

Instructions to Participants (in your

Talk over your responses to the ques

Objectives:

To become more aware of each other
team members and as work group me

own words):

tions in Handout #13.

r's communication style, as
embers.

NONVERBAL COMMUNICATION

Step 16: **"OBSERVA**
(READING

Allow: **5 minutes**

Materials: **Handout #1**

How to Proceed: **Distribute a**
discuss the

ATION GUIDE"
AND DISCUSSION)

4 (pp. 46-47)

nd have participants read and
use of Handout #14.

Instructions to Participants (in yo

Read this handout and identify be
observe.

This Guide is for use throughout t

Objectives:

**To provide a means for partners t
feedback about nonverbal and ve**

ur own words):

haviors for your partners to

he workshop.

o practice observing and giving
rbal behavior.

HANDOUT =14: Observation G
Nonverbal Co

NOTE: This handou
production, will be
section of the Proce
package.

Whenever your pair partner seen
and something else nonverbally, ma
non-verbal behavior which appears

uide: Perception Checking Observation of
mmunication

ut, in form suitable for re-
found in the Handouts
ss Education for Teachers

ns to be communicating one thing verbally
ake appropriate notes. Make a note of any
to you to convey an *idea* or a *feeling*.

Nonverbal things my partner does and wants me to watch for

Behavior	What I saw	What I him sa

Nonverbal things I have noticed which
don't think my pair partner is aware
of or has not told me about

heard y	What I saw him do	My guess is that what he really thinks is
		What he really feels is

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. To what degree do you feel that these activities increased your awareness of reliance on nonverbal cues?

1	2	3	4	5	6
not at all					complete understanding

Why?

Why not?

2. As a result of the activities and discussion of nonverbal communication, in what ways, if any, do you feel that you will modify your behavior?

ED 084256

PROCESS EDUCATION FOR TEACHERS

MODULE 6

SOCIAL ORGANIZATION

U.S. DEPARTMENT OF HEALTH,
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J. William Pfeiffer and John E. Jones
for Human Relations Training, Vol.
615, Iowa City, Iowa 52240): "NAS

Social Studies Curriculum Project, E
(Cambridge, Mass.), *Man: A Course*
Baboon Troop (booklet); "Dynamics
DeVore, Selections from *Field Notes*
by Curriculum Development Associa

NTS

, *A Handbook of Structured Experience*
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A Exercise," pp. 54-57

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s of Male Dominance" (film); Irven
; Teacher Guide, Book 5 (disseminated
tes, Washington, D.C.)

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Objectives

To Prepare for This Module

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Step 1: Introduction

Step 2: "Baboon Troop" (film)

Step 3: Discussion of Film

Step 4: "Dynamics of Male Dominance"

Step 5: Discussion of Films

Step 6: Simulation

Step 7: Review and Summary of Baboo

Special Procedures for
NASA SIMULATION

Step 8a: NASA Simulation (Part I)

Step 8b: NASA Simulation (Part II)

Step 8c: NASA Simulation (Part III)

Step 8d: NASA Simulation (Part IV)

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RATIONALE

In an effort to define man's humanness, *M*
examines man as a social creature. For the
order to provoke new questions, we look a
group-living baboons. Baboons do not hav
group structure held together by learned b
emotional ties. This group structure enabl
cance of roles and behavior of individuals a
learning, aggression, dominance, cooperati

The NASA simulation is a means of analy
members have for each other and the soci
these expectations. Through data generate
groups may analyze the effect of expectati
on the behavior of others toward him. The
which influence the formation of expectat

OBJECTIVES

To develop awareness of the interrelations
social organization of a group.

To develop awareness of the social signific
roles in animal and human groups.

To develop awareness of the influence of
group behavior.

an: A Course of Study (MACOS)
purpose of comparison, and in
t other social animals, particularly
e "families," but they do have a
ehavior patterns and strong
es us to examine the social signifi-
and groups for example,
on, and communication.

ing the expectations human group
l organization which results from
d by this simulation, individuals and
ons on an individual's behavior and
y can also analyze the factors
ions.

hip between expectations and the

ance of various forms of behavior/

xpectations on individual and

Instructions to Participants (in your own words):

(See Step 1, Instructions to Participants).

Objectives:

To encourage data collection and observation.

To illustrate the concept of social organization by focusing on the role and behavior of members of the group.

To foster speculation and hypothesis formation.

SOCIAL ORGANIZATION

Step 3: **DISCUSSION OF FILM**

Allow: **10-15 minutes**

Materials: **None**

How to Proceed: **Use this discussion as a bridge between the two films. Review the question (what is the social organization of baboons?) asked earlier in connection with the booklet. Now talk about the new data that were utilized to answer the same question, and how they may have altered or changed hypotheses reached earlier. When baboon organization has been sufficiently identified, move on to the next film. Indicate DeVore's narration and illustration, and show his data base *(Field Notes)* for baboon social organization.**

CAUTION: In comparing humans and baboons, *permit no anthropomorphism!* Differences as well as similarities should be emphasized.

Instructions to Participants (in your own words):

In the film, what specific behavior did you see that was significant in terms of social organization in the baboon troop?

(Introducing second film), what specific evidence does DeVore use to form his hypothesis on baboon social organization? See whether you come to the same conclusion he did from the same data.

Objectives:

To extend and refine understanding of social organization.

To use data to refine hypotheses.

To use and apply the methods of social science investigation, data collection, analysis.

Instructions to Participants (in your own words):

Read NASA problem.

Place your name at the top of both (identical) worksheets (Handout #16). You have 15 minutes to complete the exercise. You are to work individually. Record answers on both sheets and hand in one.

At the conclusion of the exercise, form groups of approximately six persons each.

Objectives (for Steps 8a-e):

To compare the results of individual and group decision-making.

To consider factors which influence our judgment of intellectual capability.

To consider factors which influence our judgment of effective group membership.

To reflect on discrepancies between self-perceptions and the perceptions others have of us.

SOCIAL ORGANIZATION

Step 4:	**"DYNAMICS OF MALE DOMINANCE" (FILM)** **NARRATED FILM DEMONSTRATING ELEMENTS OF TROOP ORGANIZATION**
Allow:	**30 minutes**
Materials:	**film (MACOS)** **projector**
How to Proceed:	**Show film to participants.**

Instructions to Participants (in your own words):

None

Objectives:

To reinforce the concept of social organization.

To stress specific role behavior of members of the troop, especially males striving for dominance.

To develop an understanding of the adaptive survival pattern within the baboon troop.

_____Box of matches

_____Food concentrate

_____50 feet of nylon rope

_____Parachute silk

_____Portable heating unit

_____Two .45 calibre pistols

_____One case dehydrated Pet milk

_____Two 100-lb. tanks of oxygen

_____Stellar map (of moon's constellation)

_____Life raft

_____Magnetic compass

_____5 gallons of water

_____Signal flares

_____First aid kit containing injection needles

_____Solar-powered FM receiver-transmitter

SOCIAL ORGANIZATION

Step 5: **FOLLOW-UP DISCUSSION REVIEW OF SUMMARY OF DATA FROM BOTH FILMS**

Allow: **10-15 minutes**

Materials: **MACOS booklet, DeVore's *Field Notes*, distributed among participants**

How to Proceed: **Use the questions already posed to generate further discussion of social organization, roles, dominance behavior, and the troop as an adaptive mechanism. Reinforce the concept of the adaptive survival patterns existing within the baboon troop. Again emphasize that responses must be data-based.**

Instructions to Participants (in your own words):

What specific behavior did you see which is significant in terms of social organization in the baboon troop?

Objectives:

To provide further data-collecting experiences, with opportunity to interpret and analyze data.

SOCIAL ORGANIZATION

Step 6: SIMULATION
SETTING UP BABOON TROOPS
ON ENVIRONMENT BOARDS

Allow: 30 minutes

Materials:
Handout #15 (p. 18)
MACOS booklets: *Baboon Troop*
DeVore's *Field Notes*
heavy cardboard
cutouts of baboons
scissors
tape
colored paper
cardboard
cotton
pipe cleaners
paste
MACOS, Teacher Guide, Book 5, Lessons A and F

How to Proceed: Display pictures and books which depict geographical aspects of baboon environment. Encourage participants to represent, as nearly as possible, the environment as it actually is. Situation assignments are made by numbers written on pieces of paper (1-5).

Divide the class into five groups for the problem-solving activity. Each group must create an appropriate response to one of five hypothetical situations. This response must be based on data sources and explained and defended to the other groups.

Instructions to Participants (in your own words):

In your group, construct an environment board that illustrates the baboon troop in the situation assigned to you (one of the five slips of paper). Use other course materials to collect data. Remember that this is a group effort.

(For directions on creating environment boards, refer to MACOS, Teacher Guide, Book 5, Lesson A, p. 11; Lesson F, p. 43.)

Objectives:

To promote the use of many sources of data in a group problem-solving situation.

HANDOUT #15: Social Organization–Simulation

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

In quartet, using environment boards, show these situations:
A baboon troop:
- crossing a plain
- drinking at a water hole
- resting
- facing a predator
- going into sleeping trees

Place cutouts, drawings, or figures according to the way baboons would be placed in the above situations. Encourage three-dimensional projects.

Use *Baboon Troop* and *Field Notes* as sources of information in addition to the film.

Sharing: Participants share their environment boards. Group presenting give a minimum of information. Other participants are to note relationships and tell what the situation is.

HANDOUT #17: NASA Exercise Group Worksheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

INSTRUCTIONS: This is an exercise in group decision-making. Your group is to employ the method of *group consensus* in reaching its decision. This means that the prediction for each of the 15 survival items *must* be agreed upon by each group member before it becomes a part of the group decision. Consensus is difficult to reach. Therefore, not every ranking will meet with everyone's complete *approval.* Try, as a group, to make each ranking one with which *all* group members can at least partially agree. Here are some guides to use in reaching consensus:

1. Avoid *arguing* for your own individual judgments. Approach the task on the basis of logic.
2. Avoid changing your mind *only* in order to reach agreement and avoid conflict. Support only solutions with which you are able to agree at least somewhat.
3. Avoid "conflict-reducing" techniques such as majority vote, averaging, or trading in reaching your decision.
4. View differences of opinion as helpful rather than as a hindrance in decision-making.

_____Box of matches
_____Food concentrate
_____50 feet of nylon rope
_____Parachute silk
_____Portable heating unit
_____Two .45 calibre pistols
_____One case dehydrated Pet milk
_____Two 100-lb. tanks of oxygen
_____Stellar map (of moon's constellation)
_____Life raft
_____Magnetic compass
_____5 gallons of water
_____Signal flares
_____First aid kit containing injection needles
_____Solar-powered FM receiver-transmitter

SOCIAL ORGANIZATION

Step 8c: NASA SIMULATION (PART III)

Allow: 105 minutes (total time for Steps 8a-

Materials: Handout #18 (p. 36)

How to Proceed: Distribute handout among participan

HANDOUT #15: Social Organization—Simulation

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

In quartet, using environment boards, show these situations:

A baboon troop:
  - crossing a plain
  - drinking at a water hole
  - resting
  - facing a predator
  - going into sleeping trees

Place cutouts, drawings, or figures according to the way baboons would be placed in the above situations. Encourage three-dimensional projects.

Use *Baboon Troop* and *Field Notes* as sources of information in addition to the film.

Sharing: Participants share their environment boards. Group presenting gives a minimum of information. Other participants are to note relationships and tell what the situation is.

SOCIAL ORGANIZATION

Step 7:	**FOLLOW-UP DISCUSSION REVIEW AND SUMMARY OF BABOON SOCIAL ORGANIZATION**
Allow:	10-15 minutes
Materials:	None

How to Proceed:

Participants should visit each other's environment boards. Each group, together, moves from board to board. A few minutes are allowed for examination (situation) and making a record (identification) of each visit.

In follow-up discussion, ask each group to demonstrate its response and provide its rationale. Others should be prodded to question each group's reply.

Instructions to Participants (in your own words):

As you visit the other boards, ask: What are the baboons doing here? How can you tell? Why are the troop members in the places they are?

Objectives:

To reinforce all earlier objectives of the module.

Instructions to Participants (in your own words):

Each participant is to rank himself and every other member of his group on two dimensions: (1) number of correct answers, (2) degree of group participation. The member's name must appear on each ranking sheet. The sheets will be collected.

Objectives(for Steps 8a-e):

To compare the results of individual and group decision-making.

To consider factors which influence our judgment of intellectual capability.

To consider factors which influence our judgment of effective group membership.

To reflect on discrepancies between self-perceptions and the perceptions others have of us.

HANDOUT =18: Ranking Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

NAME ____________________

Rank all members of group including self:

Participant's Name	Correct Answer ranking (1=highest)	Participation ranking (1=highest)
____________________	____	____
____________________	____	____
____________________	____	____
____________________	____	____
____________________	____	____
____________________	____	____

Instructions to Participants (in your own words):

As you visit the other boards, ask: What are the baboons doing here? How can you tell? Why are the troop members in the places they are?

Objectives:

To reinforce all earlier objectives of the module.

SPECIAL PROCEDURES FOR NASA SIMULATION
(steps 8a, 8b, 8c, 8d, 8e,)

The implications of data generated by this exercise can be threatening for individual participants—that is, may lead to hostility, withdrawal, or other resistance patterns. Workshop leaders are obligated to provide support and reinforcement for such participants. Previous work in group dynamics is essential.

Readiness of participants for this activity must be assessed. The data generated by this exercise require extensive discussion time and time for individual reflection.

The following are specific procedural considerations:

1. Each individual must be assigned a coded identification. No names appear on the final chart.
2. Two NASA Exercise Individual Worksheets (Handout #16) should be filled in by each participant (and should include his name), so that one may be scored by workshop leaders during group consensus-seeking. See NASA Exercise Answer Sheet (Handout #19) and Direction Sheet (Handout #20) for scoring. Results should be charted.
3. Workshop leaders must calculate the average individual score following directions on the Direction Sheet (Handout #20). Results should be charted.
4. Group sheets are to be collected at the end of the group activity and scored according to the procedure followed for scoring individual answer sheets. Results should be charted.
5. Rankings for self/other correctness and self/other participation should be charted while each participant scores his remaining individual worksheet and then engages in other activity. Charting the rankings is time-consuming and requires two or three people.
6. Sample charts are reproduced here to guide you in constructing your own. The sample is for a group of six. A sample of the data generated is also included, to help guide your thinking about inferential questioning. See the sample questions that follow.

HANDOUT #18: Ranking Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

NAME ____________________

Rank all members of group including self:

Participant's Name	Correct Answer ranking (1=highest)	Participation ranking (1=highest)

SOCIAL ORGANIZATION

Step 8d:	NASA SIMULATION (PART IV)
Allow:	105 minutes (total time for Steps 8a-e)
Materials:	Handout #19 (p. 40) Handout #20 (p. 41)

How to Proceed: Distribute handouts among participants.

SOCIAL ORGANIZATION

Step 8a:	**NASA SIMULATION (PART I)**
Allow:	**105 minutes (total time for Steps 8a-e)**
Materials:	**Handout #16 (pp. 28-29), two copies to each participant** **pencils** **pens**
How to Proceed:	**(Be sure you have read the Special Procedures Section, pp. 22-24).** **After reading the NASA problem and having participants complete the worksheets (Handout #16), collect one of the sheets from each person.** **Then divide participants into groups of equal size (approximately six in each).**

HANDOUT =16:   NASA Exercis

NOTE: This hando
production, will be
section of the Proce
package.

INSTRUCTIONS: You are a m
to rendezvous with a mother ship
to mechanical difficulties, however
some 200 miles from the rendezvo
equipment aboard was damaged, a
mother ship, the most critical item
trip. Below are listed the 15 items
Your task is to rank order them in
allowing them to reach the rendezv
important item, the number 2 by t
through number 15, the least impo
this phase of the exercise.

ɛe Individual Worksheet

ut, in form suitable for re-
found in the Handouts
ss Education for Teachers

ember of a space crew originally scheduled
on the lighted surface of the moon. Owing
, your ship was forced to land at a spot
us point. During landing, much of the
nd, since survival depends on reaching the
s available must be chosen for the 200-mile
eft intact and undamaged after landing.
terms of their importance to your crew in
ous point. Place the number 1 by the most
he second most important, and so on,
rtant. *You have 15 minutes to complete*

SOCIAL ORGANI

Step 8b: N

Allow: 1

Materials: H

How to Proceed: C
S
c

IZATION

NASA SIMULATION (PART II)

05 minutes (total time for Steps 8a-e)

Handout #17 (pp. 32-33)

Give each group one group worksheet.
tress the four guides to use in reaching
onsensus.

Instructions to Participants (in your own words):

Individuals are *not* to change any answers on their individual sheets as a result of group discussion.

One member of each group is to record group consensus on the group worksheet.

The groups have 30 minutes to complete the worksheets, which will then be collected.

Objectives (for Steps 8a-e):

To compare the results of individual and group decision-making.

To consider factors which influence our judgment of intellectual capability.

To consider factors which influence our judgment of effective group membership.

To reflect on discrepancies between self-perceptions and the perceptions others have of us.

HANDOUT #17: NASA Exercise Group Worksheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

INSTRUCTIONS: This is an exercise in group decision-making. Your group is to employ the method of *group consensus* in reaching its decision. This means that the prediction for each of the 15 survival items *must* be agreed upon by each group member before it becomes a part of the group decision. Consensus is difficult to reach. Therefore, not every ranking will meet with everyone's complete *approval.* Try, as a group, to make each ranking one with which *all* group members can at least partially agree. Here are some guides to use in reaching consensus:

1. Avoid *arguing* for your own individual judgments. Approach the task on the basis of logic.
2. Avoid changing your mind *only* in order to reach agreement and avoid conflict. Support only solutions with which you are able to agree at least somewhat.
3. Avoid "conflict-reducing" techniques such as majority vote, averaging, or trading in reaching your decision.
4. View differences of opinion as helpful rather than as a hindrance in decision-making.

Instructions to Participants (in your own words):

Read the correct answers (Handout #19).
Read the directions for scoring (Handout #20).
Score your individual worksheet (Handout #16).

Objectives (for Steps 8a-e):

To compare the results of individual and group decision-making.

To consider factors which influence our judgment of intellectual capability.

To consider factors which influence our judgment of effective group membership.

To reflect on discrepancies between self-perceptions and the perceptions others have of us.

HANDOUT #19: NASA Exercise Answer Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

RATIONALE:	CORRECT NUMBER:	
No oxygen	15	Box of matches
Can live for some time without food	4	Food concentrate
For travel over rough terrain	6	50 feet of nylon rope
Carrying	8	Parachute silk
Lighted side of moon is hot	13	Portable heating unit
Some use for propulsion	11	Two .45 calibre pistols
Needs H_2O to work	12	One case dehydrated Pet milk
No air on moon	1	Two 100-lb. tanks of oxygen
Needed for navigation	3	Stellar map (of moon's constellation)
Some value for shelter or carrying	9	Life raft
Moon's magnetic field is different from earth's	14	Magnetic Compass
You can't live long without this	2	5 gallons of water
No oxygen	10	Signal flares
First aid kit might be needed but needles are useless	7	First aid kit containing injection needles
Communication	5	Solar-powered FM receiver-transmitter

HANDOUT #20: NASA Exercise Direction Sheet for Scoring

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

The workshop leaders will assume the responsibility for directing the scoring, and will follow directions 3-6 below. Individuals will score items following directions 1-2 below.

1. Score the net difference between their answers and correct answers. For example, if the answer was 9, and the correct answer was 12, the net difference is 3. Three becomes the score for that particular item.
2. Total these scores for an individual score.
3. Next, total all individual scores and divide by the number of participants to arrive at an average individual score.
4. Score the net difference between group worksheet answers and the correct answers.
5. Total these scores for a group score.
6. Compare the average individual score with the group score.

RATINGS:

0-20	Excellent
20-30	Good
30-40	Average
40-50	Fair
over 50	Poor

Step 8e:	**NASA SIMULATION (PART V)**
Allow:	**105 minutes (total time for Steps 8a-e)**
Materials:	**questions from Special Procedures Section (pp. 22-24).**

How to Proceed:	**The group is to discuss the scores, rankings, and their interpretation.**

Instructions to Participants:

(Use discussion questions in the Special Procedures Section.)

Objectives(for Steps 8a-e):

To compare the results of individual and group decision-making.

To consider factors which influence our judgment of intellectual capability.

To consider factors which influence our judgment of effective group membership.

To reflect on discrepancies between self-perceptions and the perceptions others have of us.

FEEDBACK

It has been found in practice that personal reflection time is needed following the NASA simulation. For this reason, no specific feedback questions are suggested here. Workshop leaders should, however, be alert to individual and group reactions to the exercise and might ask for feedback at a later date.

ED 084256

PROCESS EDUCATION FOR TEACHERS

MODULE 7

NATURAL SELECTION AND ADAPTATION

Margaret Berra
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for materials used in conjunction
with this module

Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.), *Man: A Course of Study, Natural Selection, Animal Adaptation* (booklets); "The Importance of Variation" developed by Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.); modified by ERIE; not currently a part of *Man: A Course of Study.*

"Hunting the Critters," designed by Dr. Edward Clawson, Principal, Akeley Campus School, Lock Haven State College (Lock Haven, Pa.)

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RATIONALE

The concepts of natural selection and adaptation have been difficult topics for children to grasp. Yet awareness of these concepts and of their effect upon a species is a key to understanding the species itself. The material in this module is not designed to be thorough, complete, or scholarly, but rather to provide a first introduction to the complexity of these forces.

OBJECTIVES

To acquaint students with a key recurring theme of *Man: A Course of Study* (MACOS).

To demonstrate the abstractness and complexity of natural selection and adaptation.

To provide a base for the spiral development of these concepts in the year-long MACOS instructional program.

TO PREPARE FOR THIS MODULE

READ Handout #21 (pp. 8-9).
PREPARE this handout for distribution among participants.

HAVE on hand for distribution copies of MACOS booklets *Natural Selection* and *Animal Adaptation.*

CUT UP 10 sheets of construction paper, each a different color, into ten equal-sized pieces, a total of 100. These are the "critters." Hide them throughout the room before participants arrive.

PREPARE a tally sheet organized by "critter" color.

NATURAL SELECTION AND ADAPTATION

Step 1:	**INTRODUCTION** **PROBLEM-SOLVING: ADAPTATION AND NATURAL SELECTION**
Allow:	**15-20 minutes**
Materials:	**Handout #21 (pp. 8-9)** **MACOS booklets: *Natural Selection* *Animal Adaptation***
How to Proceed:	**Divide the group into pairs. Distribute the handout and booklets. Dyads are to solve the problems about the Clurgs, using data in the booklets. Rationale for the drawing should be based on the forces of natural selection and adaptation.**

Instructions to Participants (in your own words):

Each dyad is to show its picture of the forest Clurg to the rest of the class and explain its data-based rationale for the Clurg's appearance.

(Similar procedures may be used for other questions on problem sheets if time, interest, and learners' outcomes permit.)

Objectives:

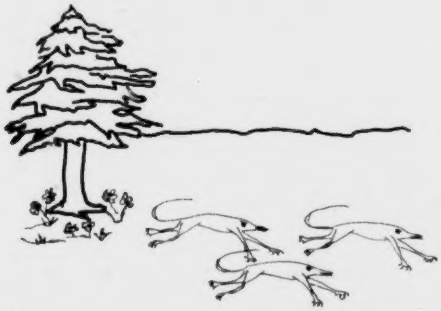
To introduce the concepts of adaptation and natural selection.

HANDOUT #21: The Importance of Variation

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

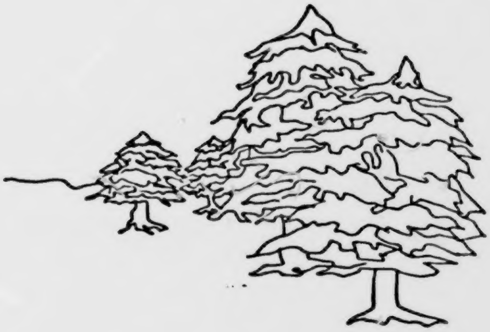
Varieties of the same species of animal may be found in two quite different environments as a result of geologic changes. Although of the same species, these organisms exhibit different characteristics developed over a considerable time span. Some differences in characteristics have allowed individual members of the species to live and reproduce more successfully in the environment. Those organisms lacking these characteristics have great difficulty in both surviving and reproducing in the same environment This is commonly called natural selection.

On this page you will read about the Clurgs, an imaginary animal species that had members living in two different environments.



This plains-dwelling animal is a member of the Clurg species. Other members of the species live in the forest. The plains-dwelling Clurgs live in groups of four or five, males and females together. During a day, they roam over the meadow, nibbling on clover and daisy roots. At night they sleep in burrows. They have excellent eyesight and good claws for burrowing. They run quickly.

The females have two or three offspring at a time. Soon after they are born, little plains-dwelling Clurgs must be able to run along with the adults or they are left behind.



The forest-dwelling Clurgs are members of the same species but they have some characteristics that are different from the plains-dwelling Clurgs. Make up characteristics of the forest-dwelling Clurgs. Sketch one or more in the picture above.

Describe how their physical characteristics would make the behaviors of the forest-dwelling Clurgs different from the behaviors of the plains-dwelling Clurgs.

> Where do they spend the day and night? What do they eat? How do they avoid predators? What are the little Clurgs like when they are born?

Suppose there was a sudden flood that lasted several weeks. Could any of the Clurgs survive? If so, what characteristics would they have?

How has natural selection affected the Clurg species?

> Have all of the members been killed and the species become extinct? Or, if some members have survived, what characteristics will they pass on to their offspring? What characteristics have disappeared?

NATURAL SELECTION AND ADAPTATION

Step 2: “HUNTING THE CRITTERS”: THE HUNT

Allow: 10 minutes (more if this occurs during coffee break)

Materials: the 100 “critters” hidden throughout the room

How to Proceed: **Participants hunt the “critters,” trying to find as many as possible. Hold one sample “critter” up to show them what it looks like, but do not divulge the number of “critters” or the number of colors.**

Instructions to Participants (in your own words):

In this room (or whatever the locale is) there are a number of "critters." Find and retrieve as many as you can.

Objectives:

To illustrate through a simulation some of the forces of adaptation and natural selection.

NATURAL SELECTION AND ADAPTATION

Step 3:	**"HUNTING THE CRITTERS": TALLY**
Allow:	**3-5 minutes**
Materials:	**prepared tally sheet, organized by color**
How to Proceed:	**Ask each participant to tell how many of each color "critter" he has found. Tally on prepared sheet. Develop a data-based chart for Step 4.**

Instructions to Participants (in your own words):

Record the number of "critters" you retrieved in the appropriate color column on the chart.

Objectives:

To illustrate through a simulation some of the forces of adaptation and natural selection.

NATURAL SELECTION AND ADAPTATION

Step 4:	**"HUNTING THE CRITTERS": INFERENCES AND IMPLICATIONS**
Allow:	**10 minutes**
Materials:	**completed tally chart**
How to Proceed:	**Inform participants that ten "critters" of each color were hidden. Draw inferences and hypotheses from the data chart by posing questions (see instructions to participants).**

Instructions to Participants (in your own words):

What effect did this hunting episode have on the "critter" species? In terms of number? Color? Future generations? Present generation? The species in general?

What if only one of a color survives? If it is a male? If it is a female?

Objectives:

To illustrate through a simulation some of the forces of adaptation and natural selection.

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PROCESS EDUCATION FOR TEACHERS

MODULE 8

STRUCTURE
AND
FUNCTION

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"Junk Bag" sequence, developed by Dr. Edward Clawson, Principal, Akeley Campus School, Lock Haven State College (Lock Haven, Pa.)

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RATIONALE

A recurring theme in *Man: A Course of Study* (MACOS) is the concept of structure and function. As defined by MACOS, structure is both innate and external. External structures are seen as technological attempts by species to extend their capacities for control of the environment.

This module provides a re-examination of the definition of a tool, in the hope of overriding contemporary man's popular notion of one tool for one function. The activities here point up man's unique ability to solve problems through observing, designing, and applying tools to multiple uses.

A further extension of the concept of structure is related to a consideration of social technology—in other words, the interrelationship of group structures, the functions and roles of group members, and how such functions and roles are determined.

OBJECTIVES

To provide a new way of looking at "tools"and technology.

To develop, utilize, and refine observational skills, taking a new look at familiar objects or feeling comfortable with something new or unconventional, utilizing problem-solving skills and techniques.

To involve members, in groups, in performing an assigned task for which there is no one right way or right answer.

To encourage members to analyze the structure of their group, the functions and roles of group members, and the process by which these functions and roles were determined.

TO PREPARE FOR THIS MODULE

READ Handout #22 (p. 36) and #23 (p. 37).
PREPARE these handouts for distribution among participants.
READ MACOS Teacher Guide, Book 4, Lesson G and Book 6, Section II, Lesson A.

HAVE on hand for distribution copies of MACOS booklets *Structure and Function, Antler and Fang,* and *Stalking the Paper Clip.*

ASSEMBLE the following materials:

wire clothes hanger
junk bags filled with unrecognizable and/or unidentifiable items (6-8 per group), odds and ends from attic, garage, basement
paper clips of assorted sizes and shapes
miscellaneous materials for use in hiding paper clips
pencil
paper
paper streamers
string
Styrofoam shapes
construction paper
pipe cleaners
balloons
crayons
magic markers
other art supplies

STRUCTURE AND FUNCTION

Step 1:	INTRODUCTION USES OF A CLOTHES HANGER
Allow:	5 minutes
Materials:	a wire clothes hanger
How to Proceed:	Show the hanger to the group and discuss its possible uses, other than the obvious ones. Let this discussion lead to alteration of the hanger for performing other functions.

Instructions to Participants (in your own words):

What might this clothes hanger be used for in its original form? How might it be altered? How does the new structure alter the function?

Objectives:

To introduce the idea that function is determined by structure, or that function follows structure; and that structure may be altered to provide a necessary function.

STRUCTURE AND FUNCTION

Step 2:	**JUNK BAG EXERCISE**
Allow:	**8-10 minutes**
Materials:	**junk bag collection of odds and ends (6-8 items per group), unrecognizable and/or unidentifiable**
How to Proceed:	**Divide participants into groups. Without announcement or comment, dump the items from the junk bag onto a table. Allow participants to examine each item.**

Instructions to Participants (in your own words):

Examine and study each item. List the functions that the structure of each item makes possible.

Objectives:

To use process skills in problem-solving where the end is unknown.

STRUCTURE
AND
FUNCTION

Step 3:	**JUDGMENT OF ITEMS EVALUATION IN TERMS OF USEFULNESS**
Allow:	**10 minutes**
Materials:	**junk bag items**
How to Proceed:	**Have participants make judgments about which of the junk bag items are most likely to be kept for a long period and state reasons for the choice. Similarly, they should determine which are less likely to be kept and why.**

Instructions to Participants (in your own words):

Which items would you keep around? Why? Which would you discard? Why?

Objectives:

To establish criteria as the basis for decision-making.

STRUCTURE AND FUNCTION

Step 4:	**SHARING CHOICES**
Allow:	**15 minutes**
Materials:	**one item chosen by each group**
How to Proceed:	**Have each group in turn place its choice on the overhead projector. Choice and criteria are explained to all. The group defends its chosen item against comments and criticisms.**

Instructions to Participants (in your own words):

Will the leader of each group in turn place the group's choice on the projector and explain to the class why his group chose the item it did. Any questions, comments, criticisms?

Objectives:

To reinforce and extend social interaction skills.

STRUCTURE
AND
FUNCTION

Step 5:	***STRUCTURE AND FUNCTION*** **(BOOKLET)** **THE RELATIONSHIP OF STRUCTURE AND FUNCTION ILLUSTRATED**
Allow:	**8-10 minutes**
Materials:	**MACOS booklet *Structure and Function***
How to Proceed:	**Distribute booklet to participants. Have them read it.**

Instructions to Participants (in your own words):
Read the booklet.

Objectives:
To reinforce the course concept of structure and function.
To introduce the recurrent theme of tool-making.

STRUCTURE
AND
FUNCTION

Step 6:	**DISCUSSION AND REVIEW**
Allow:	**15 minutes**
Materials:	**MACOS booklet *Structure and Function*** **MACOS Teacher Guide, Book 4, Lesson G**
How to Proceed:	**Together, have participants review the booklet and the total concept of structure and function.**

Instructions to Participants:

(Use the key questions in MACOS Teacher Guide, Book 4, Lesson G, to start discussion.)

Objectives:

To reinforce and extend social interaction skills.

To reinforce the course concept of structure and function.

To introduce the recurrent theme of tool-making.

STRUCTURE AND FUNCTION

Step 7:	**DEFINITION OF A TOOL PROGRAMMATIC USES OF TOOLS BY MAN**
Allow:	**2-3 minutes**
Materials:	**MACOS, Teacher Guide, Book 6, Section II, Lesson A**
How to Proceed:	**See MACOS Teacher Guide for information and presentation.**

Instructions to Participants (in your own words):

(See MACOS Teacher Guide.)

Objectives:

To establish a different frame of reference for the concept of tools and the ways in which man and animals use them.

STRUCTURE AND FUNCTION

Step 8:	**INTRODUCTION OF HUNTING STRATEGY PROGRAM FOR HUNTING**
Allow:	**2-3 minutes**
Materials:	**MACOS, Teacher Guide, Book 6, Section II, Lesson A**
How to Proceed:	**Draw out steps in hunting prey–a sequential program for the hunt.**

Instructions to Participants (in your own words):
(See MACOS Teacher Guide.)

Objectives:
To establish a strategy for group action.

STRUCTURE
AND
FUNCTION

Step 9:	***ANTLER AND FANG*** **(BOOKLET)**
Allow:	**8-10 minutes**
Materials:	**MACOS booklet *Antler and Fang***
How to Proceed:	**Distribute booklet among participants and have them read it.**

Instructions to Participants (in your own words):

Read the booklet with this question in mind: What problems face a predator in hunting caribou?

Objectives:

To illustrate problems facing an animal in hunting its prey.

To establish a base for contrast and comparison to man.

STRUCTURE AND FUNCTION

Step 10:	**STALKING THE PAPER CLIP (THE HUNT)**
Allow:	15-20 minutes
Materials:	MACOS booklet *Stalking the Paper Clip*, distributed among participants MACOS, Teacher Guide, Book 6 paper clips of assorted sizes and shapes any other materials found in room
How to Proceed:	Hide paper clips throughout the environment (the classroom). Establish ground rules and setting. Use the four-step program for hunting: (1) find, (2) approach, (3) kill, (4) retrieve and use. Do not give participants any further assistance. Enforce the ground rules. Do not suggest a strategy. Divide participants into groups.

Instructions to Participants (in your own words):

(See Teacher Guide for ground rules.)

Follow the four-step program for hunting.
Begin the hunt!

Objectives:

To reinforce direction-following, problem-solving, tool-making, group decision-making.

STRUCTURE
AND
FUNCTION

Step 11:	**USES OF CAPTURED PAPER CLIPS REINFORCING STRUCTURE AND FUNCTION**
Allow:	20 minutes
Materials:	"captured" paper clips pencil paper
How to Proceed:	Have groups make a tally of "captured" paper clips. Who got the most? Speculate on the reasons for success or failure in hunting. The workshop leader should relate the speculations to the strategy employed. Evaluate strategies. Groups should determine uses for captured paper clips. Each group is to determine several different uses for the clips. These are recorded. The workshop leader should be alert to unusual uses, and reinforce creativity in structure and function.

Instructions to Participants (in your own words):

Night just fell, so the hunt is over. Stop hunting and each group count your "captives." Which group got the most paper clips? Make a list of uses for the "captured" paper clips.

Objectives:

To reinforce two key MACOS concepts: structure and function, and tools.

STRUCTURE AND FUNCTION

Step 12:	**TOWER-BUILDING EXERCISE: DIRECTIONS**
Allow:	**3 minutes**
Materials:	**paper streamers** **string** **styrofoam shapes** **construction paper** **pipe cleaners** **balloons** **crayons** **magic markers** **other art supplies**
How to Proceed:	**(see Instructions to Participants, p. 29)**

Instructions to Participants (in your own words):

Divide into work groups of about equal size. Each group will receive a box of identical materials. Each group should:

- (a) use only materials in the boxes;
- (b) use some of each material in the box;
- (c) build their tower in the same room;
- (d) use anything in the room as a support.

The towers will be judged on aesthetic criteria.

(See Special Procedures Section, p. 30).

Objectives:

To participate in a group, and then to analyze the structure of the group, the functions or roles played by each member, and the process by which these functions and roles are determined.

SPECIAL PROCEDURES FOR STEP 12

CRITERIA FOR JUDGING TOWERS

1. Were materials cleverly used?
2. How was space utilized?
3. How independent of other groups was this group activity?
4. What is the "movement" of the structure?
5. Do materials harmonize to express a theme?
6. Is it eye-catching?
7. Does it have beauty?
8. Is it a dramatic effort?
9. Would you have it in your home?

STRUCTURE
AND
FUNCTION

Step 13:	**TOWER CONSTRUCTION**
Allow:	**45 minutes**
Materials:	**paper streamers string styrofoam shapes construction paper pipe cleaners balloons crayons magic markers other art supplies**
How to Proceed:	**Have groups begin construction of their towers.**

Instructions to Participants (in your own words):

None

Objectives:

To participate in a group, and then to analyze the structure of the group, the functions or roles played by each member, and the process by which these functions and roles are determined.

STRUCTURE

AND

FUNCTION

Step 14:	**PERSONAL REFLECTION AND OPTIONAL RATING**
Allow:	**25 minutes**
Materials:	**Handouts #22 (p. 36) and #23 (p. 37)**
How to Proceed:	**Individuals who desire to be rated on the optional rating sheet request members of their work group to complete a rating sheet for them, placing the name of the individual being rated at the top of the sheet. Workshop leaders must be alert to possible consequences for individuals who request ratings.**

Instructions to Participants (in your own words):

Each of the participants is to complete the individual reflection sheet. The rating sheet is optional.

Objectives:

To participate in a group, and then to analyze the structure of the group, the functions or roles played by each member, and the process by which these functions and roles are determined.

HANDOUT #22: Individual Reflection Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

1. Identify the role or roles played by each person—for example, builders, material handlers, planners.

2. How were these roles determined? Did roles change and, if so, why?

3. Did your role in the group change as a result of a change in the task?

4. Rate on the following scale your group's degree of competition/cooperation.

1	2	3	4	5	6
cooperation					competition

5. Did the fact you all built in the same room, increase or decrease competition?

6. Would you say your behavior reflected more a concern for task or a concern for people?

7. Do you feel you and/or your group utilized communication skills? Which specific skills?

Me	Group

HANDOUT #23: Optional Rating Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

If you desire, check your personal effectiveness (1 = low, 6 = high) by checking others' perceptions of:

a. 1 2 3 4 5 6
your ability to listen.

b. 1 2 3 4 5 6
tendency to build on ideas of others.

c. 1 2 3 4 5 6
willingness to be influenced.

d. 1 2 3 4 5 6
tendency to take over group.

e. 1 2 3 4 5 6
reactions to opinions opposed to yours.

f. 1 2 3 4 5 6
your reactions to comments about your behavior in a group.

STRUCTURE AND FUNCTION

Step 15:	**REPORT OF JUDGES AND GROUP DISCUSSION**
Allow:	**25 minutes**
Materials:	**None**
How to Proceed:	**Judges are instructed to reveal their criteria and each group's rating on the criteria. (See Special Procedures Section, p. 30).** **See Discussion Questions (p. 40) for specific questions for group discussion.**

Instructions to Participants (in your own words):

None

Objectives:

To participate in a group, and then to analyze the structure of the group, the functions or roles played by each member, and the process by which these functions and roles are determined.

DISCUSSION QUESTIONS

1. Did you immediately begin the task or did you plan first?
2. Were roles diversified in your group–planner, materials handler, builder? How were they determined? Did they change? Why?
3. Were you aware of competing (1) within your group; (2) among the groups?
4. Which role in the construction project did you most enjoy? Planner, materials handler, builder? Why?
5. Were you aware of particular individuals who:
   - (a) initiated the activity; helped the group to get started?
   - (b) were seeking information clarification, additional information?
   - (c) were seeking opinion; what the group was feeling?
   - (d) were giving information; offering facts?
   - (e) were giving opinion; expressing what they thought?
   - (f) were elaborating; offering further clarification?
   - (g) were coordinating; showing relationships among ideas?
   - (h) were summarizing; pulling together?
   - (i) were testing workability; making application to the situation?
6. Were you aware of individuals who were:
   - (a) encouraging?
   - (b) expressing group feelings?
   - (c) harmonizing?
   - (d) compromising?
   - (e) setting standards?

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PROCESS EDUCATION FOR TEACHERS

MODULE 9

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FORCE-FIELD
ANALYSIS

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Northwest Regional Educational Laboratory (Portland, Ore.), "The Force Field Diagnostic Technique," "A Case Study of the Research Using Problem Solving Process," from Research Utilizing Problem Solving package

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RATIONALE

This module was designed to introduce force-field analysis as a diagnostic tool for decision-making in social science problem situations. In order to illustrate the practical application of this technique, and to provide practice in force-field analysis, the design of the module requires participants to generate data about two potential problem situations: (1) installation of a new curriculum (MACOS) and (2) participation in the workshop.

OBJECTIVES

To introduce force-field analysis as a diagnostic tool for decision-making.

To illustrate practical applications of this technique, using the workshop situation and *Man: A Course of Study* (MACOS) content and installation as vehicles.

TO PREPARE FOR THIS MODULE

READ the Special Procedures Section (pp. 18, 36).

READ Handouts #24 (pp. 8-12), #25 (pp. 22-27), and #26 (p. 32).
PREPARE these handouts for distribution to participants.

ASSEMBLE these materials:
- pencils
- chart paper
- magic markers
- tape

FORCE-FIELD ANALYSIS

Step 1: THEORY INPUT ON FORCE-FIELD ANALYSIS

Allow: 20 minutes

Materials: Handout #24 (pp.8-12)
pencils

How to Proceed: Distribute handout and pencils to participants.

Instructions to Participants (in your own words):

Read the input on force-field analysis and complete the force field for the included problem statement.

Objectives:

To become aware of the principles and techniques of force-field analysis and to do a partial analysis.

HANDOUT #24: The Force Field Diagnostic Technique

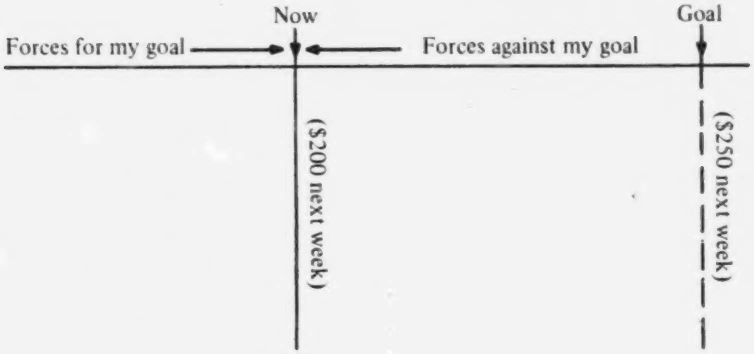
NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

A problem situation exists when there is a difference between the way things are and the way someone wants them to be. Kurt Lewin borrowed a technique from the physical sciences and offered it as a way to understand social science problem situations. It is called the force field diagnostic technique. The idea is that any social/psychological situation is the way it is at any given moment because sets of counter balancing forces are keeping it that way.

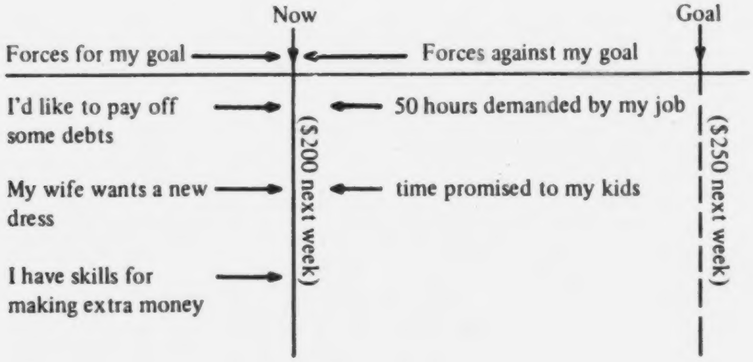
For example, let's look at the amount of money I am apt to earn next week. Let's say it is apt to be about $200.00. There are factors, or forces, in my life that might cause me to earn more than that. I have some debts that I'd like to pay off. My wife wants a new dress. I have some skills for making extra money as an entertainer and as a consultant on teacher education. On the other hand, there are forces against my earning more than $200.00 next week. I'll have little time or energy next week beyond the 50 hours demanded by my job and the time I promised to spend with my kids.

In the force field diagnostic technique, you start by writing a problem statement at the top of a page and drawing a line down the middle of the page. The line down the middle represents the way things are now. Draw a dotted line down the right hand side of the page which represents how you would like things to be. For example, supposing I wanted to earn $250.00 next week instead of my usual $200.00. I would begin to write out my force field diagram as follows.

Problem Statement: I am causing myself a problem in that I want to change my earning goal for next week from $200.00 to $250.00.


Now
Goal
Forces for my goal
Forces against my goal
($200 next week)
($250 next week)

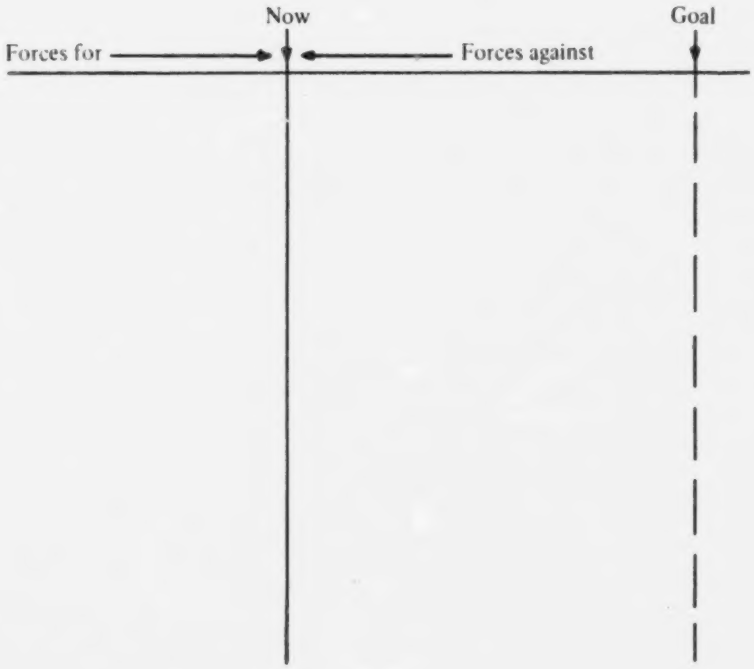
Next I would write down all of the important forces I can think of that could help push me toward achieving my goal. I write these on the left side of the diagram with an arrow from each pointing in the direction of my goal. I write down forces pushing against movement toward my goal on the right side of the center line.


Now
Goal
Forces for my goal
Forces against my goal
I'd like to pay off some debts
My wife wants a new dress
I have skills for making extra money
50 hours demanded by my job
time promised to my kids
($200 next week)
($250 next week)

HANDOUT #24: (cont.)

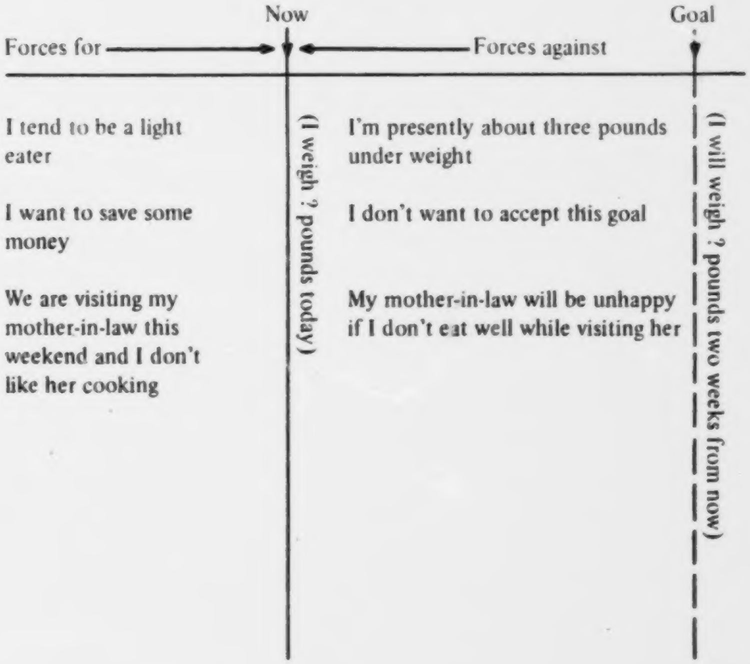
Now you try an example. Suppose you accept a goal of losing five pounds during the next two weeks. Write out a force field below for this goal. Write out a problem statement, the forces for and the forces against. Then go to the next page of this handout.

Problem Statement:


Now
Goal
Forces for
Forces against

Your force field on losing five pounds during the next two weeks should look something like the following illustration.

Problem Statement: You set a goal for me of my losing five pounds duirng the next two weeks.



Forces for	Forces against
I tend to be a light eater	I'm presently about three pounds under weight
I want to save some money	I don't want to accept this goal
We are visiting my mother-in-law this weekend and I don't like her cooking	My mother-in-law will be unhappy if I don't eat well while visiting her

Of course, the forces you wrote down are apt to differ from the ones in this illustration. The important thing is that you understand the technique. Here are some guidelines to help make the force field diagnostic technique a powerful one.

1. Be as specific as possible in the way you write each force. Don't write things like, "poor communication." Write, "Sally and Martha don't tell each other their reasons for using different instructional materials."

Forces are stated most helpfully when written in such a way that someone else reading one would know who to go to and what to ask in order to get a fuller understanding of what is involved in that force.

2. Try to state discrete forces rather than global ones. A force can often be broken down into further sub-parts. For example, a force such as, "I find it hard to lose weight," might break down to three more discrete forces as follows. "I get a headache when I skip a meal." "My wife often serves rich desserts." "Television ads get me thinking about eating in the evening." Sometimes, you can think of ways to break down a force into more discrete subparts by considering the forces for and against changing a force that you are considering!

3. Thinking about categories of forces can help you think of ones you might otherwise overlook. Consider categories of forces in: yourself–"I get a headache when I skip a meal." other individuals–"My wife often serves rich deserts." groups–"We often share materials in our department." or organizations–"The district gives salary credit for this training." society–"Television ads get me thinking about eating."

FORCE-FIELD ANALYSIS

Step 2: **DISCUSSION PERIOD**

Allow: **10 minutes**

Materials: **partial analysis done in Step 1**

How to Proceed: **Participants are encouraged to share the partial analysis they did in Step 1.**

Instructions to Participants (in your own words):
Share and talk about your partial analysis.

Objectives:
To share insights about force-field analysis.

FORCE-FIELD ANALYSIS

Step 3: **GROUP-GENERATED FORCE-FIELD ANALYSIS ON "FORCES FOR AND AGAINST INTRODUCING A NEW CURRICULUM (MACOS)"**

Allow: **30 minutes**

Materials:
chart paper
magic markers
tape

How to Proceed: **Brainstorming—no evaluation!**

This force-field analysis should be viewed by workshop leaders as a diagnostic tool which reveals participants' feelings about their skills.

Instructions to Participants (in your own words):

Identify the forces operating for and against installation of a new curriculum. Then identify the source of each force: (1) self, (2) other, (3) organizations, (4) society. (See Special Procedures, P. 18).

Objectives:

To practice doing a force-field analysis and refine it by identifying the source of each force.

SPECIAL PROCEDURES FOR STEP 3

Identifying the Problem: Who is causing it and who is affected by it; What specific goals would need to be attained in order for it to be resolved? What kind of a problem is it? For example:

SELF:	Conflict of values and attitudes; my lack of skills; my inability to express feelings; a different perception.
OTHER:	Lack of understanding or skills; unwillingness to use his resources; conflict about values and attitudes.
ORGANIZATIONS:	Lack of communication channels, scheduled time and resources; unclarity about membership roles and norms; power conflicts in decision-making; lack of support for innovation.
SOCIETY:	Conflict between community and school values; lack of clarity about goals; other structures in conflict with school structures.

FORCE-FIELD ANALYSIS

Step 4:	**THEORY INPUT ON FORCE-FIELD ANALYSIS REFINEMENT RATING, RANKING**
Allow:	**15 minutes**
Materials:	**Handout #25 (pp. 22-27)**
How to Proceed:	**Distribute handout among participants.**

Instructions to Participants (in your own words):

Read the handout, noting particularly the way in which forces are ranked and rated.

Objectives:

To become aware of additional principles and techniques–rating and ranking.

HANDOUT #25: Force Field Technique for Diagnosing a Problem

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

To use this technique, one must first *state a problem* in terms of a clear goal. An example will be used to illustrate the technique. Mr. Smith is a youth worker who states his problem as follows:

> As an adult working with a group of youth, I'm concerned about developing interdependence between us. I don't want the youth in our group to do things just because I suggest them. On the other hand, I don't want them to reject ideas just because they come from the adult. I have a goal for the group of becoming more open and active in criticizing what they see as helpful and nonhelpful in my suggestions and of seeking my reactions to theirs.

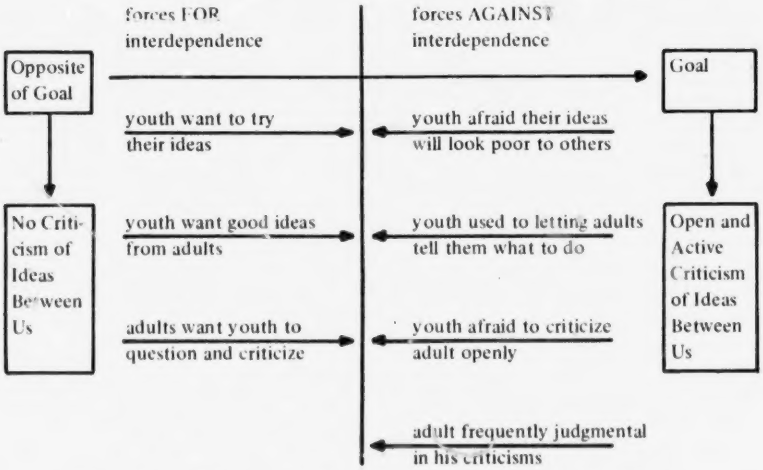
Mr. Smith now is ready to write out his first force field. He takes a *blank sheet of paper* and *writes* the general nature of the problem at the top. He then draws a horizontal line across the top. On the left side of the line he writes the words *forces for interdependence.* On the right side he writes *forces against interdependence.* In the right margin of the paper he writes the goal which he has specified for his problem, "open and active criticism of ideas between the group and me." In the left margin of the paper he writes the opposite of his goal, "no criticism of ideas between the group and me."

Now he draws a vertical line down the middle of the page. This line represents the way things are at the moment with regard to openness and activeness of criticism between him and the group. Things are the way they are at the moment because there is a set of forces pushing from *the left toward* openness and activeness of criticism, and an equal set of forces pushing from the *right against* openness and activeness. If the forces on the left become stronger while those on the right stay the same or get weaker, the line will move toward the right—toward more oppennes and activeness. Mr. Smith now must write out what he believes to be the important forces operating in this situation.

Diagram I presents his *first effort* at writing out the force field.

DIAGRAM I

Force Field No. 1 – Interdependence Between the Group and Me


forces FOR interdependence
forces AGAINST interdependence
Opposite of Goal
Goal
youth want to try their ideas
youth afraid their ideas will look poor to others
No Criticism of Ideas Between Us
youth want good ideas from adults
youth used to letting adults tell them what to do
Open and Active Criticism of Ideas Between Us
adults want youth to question and criticize
youth afraid to criticize adult openly
adult frequently judgmental in his criticisms

Mr. Smith wasn't very satisfied with his first effort to draw the force field. He suspected there were additional forces other than the ones he had thought of. During his next meeting with the youth, he raised the question of how people felt about discussing each other's ideas. He asked specifically for their reactions to some of the ideas he had recently suggested. He especially asked them to share their reactions. They seemed reserved, however, about giving them. One of them told him privately later, "We just don't talk about that with adults. I would have said some things, but the other kids would have thought I was being an apple polisher."

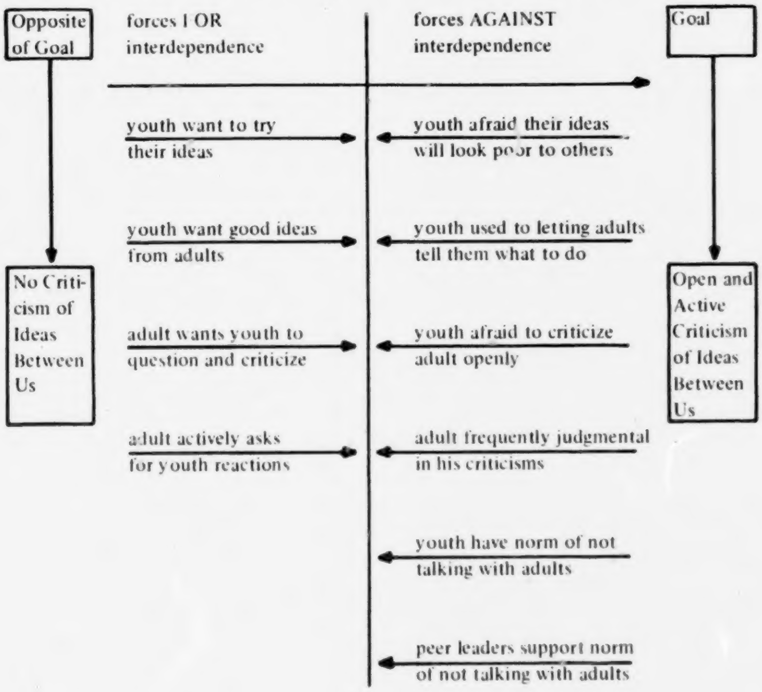
Mr. Smith believed he had learned two things from the discussion. One was that an additional "force for" was to actively ask the youth for their reactions. Another was that there was some kind of norm among the youth about not talking to adults in a way that would be seen as "apple polishing." This norm appeared to be an important "force against." He thought maybe that peer leadership of the group was an important "force against" which was affecting the way this norm operated in the group.

In Diagram II Mr. Smith has added these three forces to the force field.

HANDOUT #25: (cont.)

DIAGRAM II

Force Field No. 2 – Interdependence Between the Group and Me

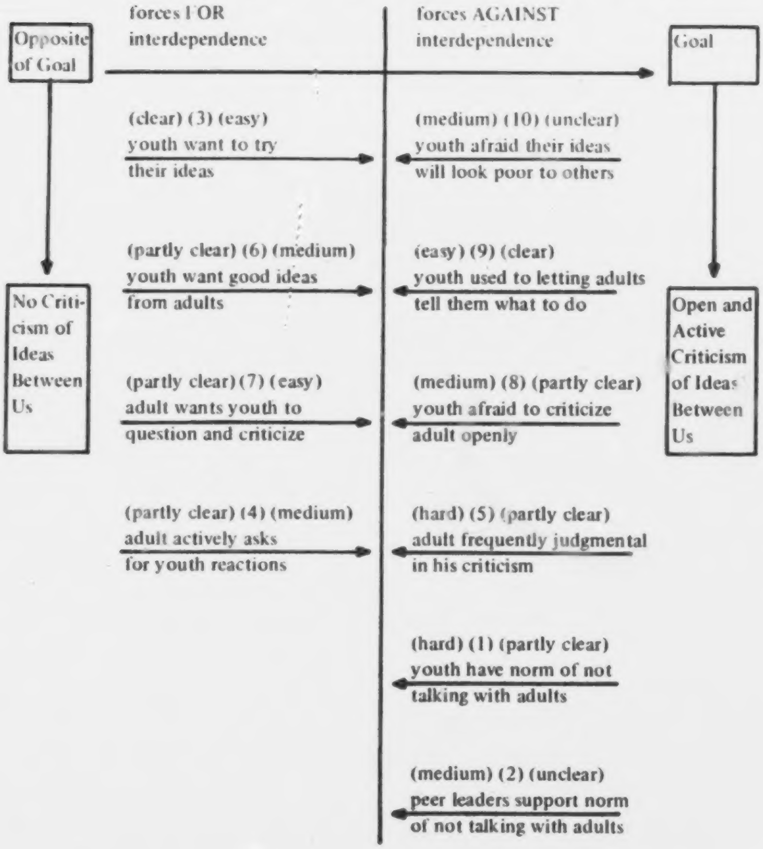

Opposite of Goal
forces FOR interdependence
forces AGAINST interdependence
Goal
youth want to try their ideas
youth afraid their ideas will look poor to others
youth want good ideas from adults
youth used to letting adults tell them what to do
No Criticism of Ideas Between Us
Open and Active Criticism of Ideas Between Us
adult wants youth to question and criticize
youth afraid to criticize adult openly
adult actively asks for youth reactions
adult frequently judgmental in his criticisms
youth have norm of not talking with adults
peer leaders support norm of not talking with adults

Mr. Smith now did three additional things with his force field. First, he ranked all of the forces in terms of *how important* he thought they were in trying to change the situation. He put a number 1 by that force field which he believed would yield the most movement *toward the goal* if it could be changed. He put a 2 by the force that he thought would result in the second greatest amount of movement if changed, and so forth. Second, he *rated* each force in terms of *how easy* he thought it would be for him to bring about some change in it. He gave each force a rating of hard, medium or easy. Third, he again *rated each force*, this time in terms of how clear he was about whether it really was a force. Was he just imagining it to be a force, or was it really operating? He labeled each force as clear, partly clear, unclear.

Diagram III presents Mr. Smith's force field at this point.

DIAGRAM III

Force Field No. 2 – Interdependence Between the Group and Me


forces FOR interdependence
forces AGAINST interdependence
Opposite of Goal
Goal
(clear) (3) (easy) youth want to try their ideas
(medium) (10) (unclear) youth afraid their ideas will look poor to others
(partly clear) (6) (medium) youth want good ideas from adults
(easy) (9) (clear) youth used to letting adults tell them what to do
No Criticism of Ideas Between Us
Open and Active Criticism of Ideas Between Us
(partly clear) (7) (easy) adult wants youth to question and criticize
(medium) (8) (partly clear) youth afraid to criticize adult openly
(partly clear) (4) (medium) adult actively asks for youth reactions
(hard) (5) (partly clear) adult frequently judgmental in his criticism
(hard) (1) (partly clear) youth have norm of not talking with adults
(medium) (2) (unclear) peer leaders support norm of not talking with adults

Now, Mr. Smith had a picture of what he thought was going on in his problem situation. The most important thing that stood out to him was that he was not very clear about some of the forces which he guessed to be important. He went back to the youth to get more information about forces that were not clear. He got this information both through discussions and by using questionnaires. The force which he had ranked as most important seemed so complex to him that he wrote out a force field diagram about it!

HANDOUT #25: (cont.)

This helped him identify further forces and questions he needed to discuss with the youth. Mr. Smith also began to consider ways he could alter some of the forces. He put some of these alternatives into action. His efforts to get information from the youth to determine the force fields turned out to be an action plan in itself which proved helpful. Mr. Smith found the group changing in the direction of his goal.

At the end of several weeks, Mr. Smith found it helpful to look back over his efforts. He could note the changes which had occurred in his force field over time. He knew that his current force field diagram was much more accurate than his first attempts had been. It was based on careful data gathering. He had gathered some kinds of data several times so that he could see evaluatively how some of the forces had changed in response to the action efforts which he and the youth had worked out. Most exciting to Mr. Smith was his discovery that he could share the force field technique with the youth. Now they were working together on diagnosing goal situations, planning action for the group and evaluating the reasons for success and failure.

SUMMARY

A person applying the force field technique in diagnosing a problem and/or deriving the most appropriate solution will have completed the following process steps:

1. Identified a problem/goal
2. Stated a problem applying all criteria
3. Listed forces *for* and *against* in proper form
4. *Rated* forces in numerical scales
5. *Ranked* forces in numerical scales
6. Gathered data about problem
7. Evaluated data and derived other forces, etc.
8. Derived and stated appropriate solution strategy
9. Evaluated solution effectiveness

SUMMARY FOR CRITERIA OF RANKING AND RATING

Ranking:

Importance is defined as *significance.* How important or significant is a force in yielding the most movement toward the goals?

Rating:

A. Strength refers to *resistance* to change. How easy or hard would it be to change that force? Is it hard, medium or easy?

B. Clarity refers to *evidence.* What evidence is there that it is a force? How clear is it that it is a force?

FORCE-FIELD ANALYSIS

Step 5:	**GROUP-GENERATED RATING AND RANKING OF "FORCES FOR AND AGAINST INTRODUCING A NEW CURRICULUM"**
Allow:	20 minutes
Materials:	force field generated in Step 3
How to Proceed:	(see instructions to participants)

Instructions to Participants (in your own words):

Rank each force for significance and rate each for resistance and clarity.

Objectives:

To apply principles and techniques of rating and ranking.

FORCE-FIELD ANALYSIS

Step 6: **THEORY INPUT ON UTILIZING FORCE-FIELD ANALYSIS**

Allow: **15 minutes**

Materials: **Handout #26 (p. 32)**

How to Proceed: **Distribute handout among participants.**

Instructions to Participants (in your own words):

Read the handout and talk about how force-field analysis can be a tool to formulate a solution strategy.

Objectives:

To introduce force-field analysis as a diagnostic tool for decision-making.

HANDOUT #26: Considering Action Implications of Force Field Analysis

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Considering Action Alternatives: As diagnostic work progresses, a range of action alternatives should emerge. Each should be considered in relation to knowledge of the forces operating in the problem situation. If one or some combination of the alternatives is tried, what will happen to the forces pushing toward or away from a particular goal? How will the forces operate to influence the success or failure of a trial of a particular action alternative?

Trying Out an Action Plan: At some point, one or a combination of the action alternatives will be attempted. *As the attempt is made, information will be needed* to assess whether there is movement toward the goal. This includes discovery of the forces which are changing to understand what is accounting for movement, or the lack of it. Such assessment provides both an evaluation of progress and a new diagnostic picture. It clarifies the next action steps which need to be taken. It also may identify additional skills which may be needed in order to move ahead.

Diffusion and Adaptation: Information gained from action experience in dealing with a problem should be shared with others who face similar problems. Information to be diffused should include: A clear, specific *problem statement;* the *forces involved* in the problem situation; a *description of action* taken to change the forces; *results* of action including failures as well as successes; *special problems* that were encountered; and *special skills* that were needed to carry out particular actions. These kinds of information make it possible for persons in another setting to adapt elements of what was tried to their own diagnoses of their particular problem situations.

Continuous attention to diagnosis is the cornerstone of the action-research steps of problem solving. Without complete, accurate diagnosis, problems tend to multiply. Fads are accepted which don't really fit the local situations where they are applied. Potentially good solutions are abandoned without realizing the slight changes which are needed to make them work. Decisions are made on the basis of peoples' ability to argue or on the status of positions which they hold rather than on the true facts of the situation. Helpful innovations are rediscovered and die repeatedly without being effectively shared as people don't know what to tell or what to ask.

FORCE-FIELD ANALYSIS

Step 7: INDIVIDUAL FORCE-FIELD ANALYSIS OF "FORCES FOR AND AGAINST MY PARTICIPATION IN THIS WORKSHOP"

Allow: ?
indefinite length of time (participants will begin this force field now and complete it on their own)

Materials: paper
pencils

How to Proceed: Refer to Special Procedures Section (p. 36)

Instructions to Participants (in your own words):

Begin this force field, then complete it on your own. It may be referred to, and revised, throughout the workshop.

Objectives:

To provide skill practice in analyzing factors that influence workshop participation, through the use of force-field analysis.

SPECIAL PROCEDURES FOR STEP 7

Individual Force Field:	Workshop leaders should note that timing can be a critical factor in determining the effective utilization of force-field analysis. It is a technique that requires practice and time for individual reflection. Therefore, workshop leaders may choose to introduce the technique with the Expectations Module (2) and allow time throughout the workshop to practice using this technique on a variety of topics.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. Rate your understanding of how to do a force-field analysis.

1	2	3	4	5	6
do not understand					completely understands all aspects

Explain your rating.

2. Rate the probability of your using this technique as a classroom diagnostic procedure.

1	2	3	4	5	6
certain I will not use it					certain I will use it

Why?

Why not?

3. How relevant do you feel that this technique is for analyzing personal problems?

1	2	3	4	5	6
not at all relevant					extremely relevant

Why?

Why not?

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PROCESS EDUCATION FOR TEACHERS

MODULE 10

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

U.S. DEPARTMENT OF HEALTH,
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for materials used in conjunction
with this module

Social Studies Curriculum Project, Education Development Center (Cambridge, Mass.), *Man: A Course of Study*, Teacher Guide, Book 7; *Talks to Teachers; Seminars for Teachers;* "Words Rise Up" (record); *Songs and Stories of the Netsilik Eskimos, Journey to the Arctic* (booklets); "Fishing at the Stone Weir," "Legend of the Raven," "Kigtak" (films) (disseminated by Curriculum Development Associates, Washington, D.C.)

"The Paper Drive" (film), available for rental from Churchill Films (662 North Robertson Boulevard, Los Angeles, Cal. 90069)

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4

RATIONALE

Basic to the education of a self-directed learner in a rapidly changing environment is the understanding that each individual's value system determines the way he sees reality. In order to develop understanding, that value system must be dynamic. Adaptive teachers can help learners to ask questions, seek answers, and become more explicit about their values and more analytical about the relationship between values and behavior.

This module was designed to (1) develop an awareness of distinctions basic to value inquiry, such as description, inference, and value judgment, and to give practice in making such distinctions; (2) provide practice in identifying values and increasing awareness of the relationship between values and behavior; (3) make explicit the role of the teacher in conducting a value inquiry by providing an instructional model; and (4) provide opportunity to plan a value inquiry using *Man: A Course of Study* (MACOS) as a vehicle.

In this module, participants are placed in a position where they must see other people (culture) as these people see themselves, and not as we (twentieth century) think we see them. A need for a cross-cultural perspective is thus established, accompanied by a reduction in ethnocentrism.

OBJECTIVES

To make explicit the role of the teacher in conducting a value inquiry.

To provide an initial experience in planning a value inquiry.

To see the role and place of world view in Netsilik culture in order to understand what makes man human—a basic theme of MACOS.

To develop understanding and acceptance, in the social-psychological sense, of value systems different from one's own.

TO PREPARE FOR THIS MODULE

PREVIEW films: "Fishing at the Stone Weir," "Legend of the Raven" (optional), "The Paper Drive," "Old Kigtak."
SET UP projector and make sure it is functioning properly.

PREVIEW record: "Words Rise Up."
SET UP record player and make sure it is functioning properly.

READ MACOS, Teacher Guide, Book 7; "World View," in *Talks to Teachers;* "Teaching of World View," in *Seminars for Teachers; Songs and Stories, Journey to the Arctic, True Play.*
HAVE on hand for distribution copies of the two MACOS booklets.

READ Handouts ## 27, 28, 29.

PREPARE these handouts for distribution to participants.

ASSEMBLE these materials:
  paper
  pencils

For further information about conducting a value inquiry (Stèps 9-14), see:

Ronald Lippitt, Robert Fox, et al., *The Teacher's Role in Social Science Investigation* (Chicago: Science Research Associates, 1969) pp. 21-38; and

F.R. Shaftel and G. Shaftel, *Role Playing for Social Values* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969).

If you wish, tape-record the story "Old Kigtak," from *Songs and Stories,* p. 43. (See Step 15.)

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 1:	**CREATION OF MYTHOLOGY WRITING ORIGIN MYTHS**
Allow:	**30 minutes, (no more than 2 minutes for introduction)**
Materials:	**paper pencils**
How to Proceed:	**Participants are to break into groups, each group making up its own creation myth, as original as possible. Encourage maximum creativity through diversity–not by copying or repeating the standard. Use such illustrations as "The Loon's Necklace," "Cinderella," "Hansel and Gretel," Norse and Greek mythology.**

Instructions to Participants (in your own words):

In surveying the history of mankind, one finds that even the earliest people had explanations for the origin of the world. The explanations were many and varied. Each explanation was congruent with whatever was of value to the life style and survival of the particular society in which it originated.

You will have thirty minutes to write an origin myth explaining how the world came to be.

Objectives:

To develop awareness of how an individual's or group's value system determines their interpretation of reality.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 2:	**SHARING ORIGIN MYTHS DISCUSSION OF THE SIGNIFICANCE OF VALUES EXPRESSED**
Allow:	**15 minutes**
Materials:	"World View," *Talks to Teachers*, p. 70; "Teaching of World View," *Seminars for Teachers*, p. 109
How to Proceed:	**Have each group read its myth to the group. Discuss the values and assumptions implied in each myth: magical power source, role of people, what is held in highest priority. Question these.** **This is really an attempt to penetrate the myth–to see through it to the souls of the people.** **Introduce discussion on the concept of myth and religion. Call attention to all materials cited for teachers to read, study, and use.**

Instructions to Participants (in your own words):

While each group reads its origin myth, the others should try to identify the basic factors (values). Ask questions like: What part is played in the story by magic or unknown forces? How is the unexplainable explained? Rationally? Logically? Fatalistically? As interference by the gods? In some other way?

Objectives:

To develop awareness that our basis for structuring reality is in large part cultural.

To understand man by relating his notions of world forces as they impinge on him.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 3:	INTRODUCING NETSILIK MYTHOLOGY
Allow:	10 minutes
Materials:	"Stories from the Beginning of Time" from "Words Rise Up" (record) record player MACOS, *Talks to Teachers*, p. 70; *Songs and Stories, Journey to the Arctic, True Play* (booklets)
How to Proceed:	Use this step as a bridge between the myths created by participants and a specific example from Netsilik mythology. CAUTION: There will be a tendency to consider the Eskimo myth as simplistic or laughable. Relate other sources of information from the MACOS materials (including record jacket).

Instructions to Participants (in your own words):

Take a few minutes, before listening to the record, to read the third paragraph on page 72 of *Talks to Teachers.*

Now listen to the Netsilik myth on the record, and see if you identify the Eskimos' pattern of explaining the unexplainable. Compare this origin myth with the one you wrote. What differences are there? What inferences can you make?

Objectives:

To increase appreciation of different values and points of view.

To examine the relationship between the life and the myths of the Netsilik Eskimos.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 4:	**DISCUSSION OF EXPLANATION AND IMPLICATIONS OF STORY**
Allow:	**8-10 minutes**
Materials:	**MACOS booklets and record**
How to Proceed:	**The emphasis here is simply on man's need to explain what he does not know. Explanations vary from culture to culture.**

Instructions to Participants (in your own words):

Each group should discuss these questions: What differences are there between the Netsilik myth and the one you wrote? What inferences can you draw?

Report your hypotheses (*not* findings) to the class.

Objectives:

To develop tolerance toward non-specificity and the ability to accept a number of possible answers, in recognition that there is no right or wrong, simple or complex world view.

To develop an empathy for other people and cultures.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 5:	**"FISHING AT THE STONE WEIR" (FILM)**
Allow:	**35 minutes**
Materials:	**"Fishing at the Stone Weir" (MACOS film) projector**
How to Proceed:	**Some of the events in the film can be interpreted on the basis of our own cultural experience, while others cannot. Encourage participants to observe, in an ethnographic record of a Netsilik family, the unexplainable, and to speculate—based upon observation—on why the Netsilik act as they do.**

Instructions to Participants (in your own words):

Watch this film of a Netsilik Eskimo family. The reasons for some of the actions will not be clear. Make a list of the unexplainables in the film for discussion later.

Objectives:

To provide an experience in observation and data-gathering from a visual primary source.

To achieve understanding of Netsilik life, customs, and culture, by recognizing that their values are different from ours—and that this difference unites, rather than separates, us as men.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 6:	**DISCUSSION OF "UNEXPLAINABLE" EVENTS IN FILM**
Allow:	**10 minutes**
Materials:	**all materials used so far in this module, for reference**
How to Proceed:	**Have participants tell you the events in the film which they cannot explain. List these. Do not offer explanations. The point is: why *can't* we explain these events?**

Instructions to Participants (in your own words):

What data-based observations did you make on unexplainable things in the film? What relationships do you suspect (hypotheses) are implied in these actions (events)? What actions (events) in twentieth-century America do you think the Netsilik would consider unusual or unexplainable?

Objectives:

To reinforce data-observation skills, inference-making, hypothesis formation.

To introduce an important and often neglected factor in cross-cultural studies: understanding a culture from within, as the people see themselves.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 7 (OPTIONAL):*	**"LEGEND OF THE RAVEN" (FILM)**
Allow:	**15 minutes**
Materials:	**"Legend of the Raven" (MACOS film) projector**
How to Proceed:	**Use the film as another source of contrast and comparison to study the same question of world view. Lead the group as you did in Step 6, using similar questions.**

***Steps 7 and 8 may be omitted at the discretion of workshop leaders.**

Instructions to Participants (in your own words):

What data-based observations did you make on unexplainable things in the film? What relationships do you suspect are implied in these actions? What actions in contemporary America do you think these Eskimos would find unusual or unexplainable?

What relationships can you make between the two films?

Objectives:

To stimulate appreciation of the art and mythology of another culture—one that will be the focus of studies in the MACOS curriculum for the rest of the year.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 8 (OPTIONAL):*	**REVIEW AND DISCUSSION OF WORLD VIEW, A HUMANIZING FORCE**
Allow:	**10 minutes**
Materials:	**all materials used in this module, for reference**
How to Proceed:	**Review the discussion of the record and two films, using contrast and comparison, to develop the concept of world view (cosmology), a humanizing force. Emphasize the fact that there is no such thing as a superior world view. A world view is, however, unique to man at all times and in all places.**

***Steps 7 and 8 may be omitted at the discretion of workshop leaders.**

Instructions to Participants (in your own words):

Let us review the questions we have been trying to answer in Steps 6 and 7. What generalizations and hypotheses can you draw from the films and the record?

Objectives:

To reinforce the understanding of world view as a humanizing force.

To establish a basis for value inquiry.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 9:	**"THE PAPER DRIVE" (FILM)**
Allow:	**30 minutes**
Materials:	**"The Paper Drive" (film, rented from Churchill Films)** **projector** **Handout #27 (p. 24)**
How to Proceed:	**Distribute Individual Reflection Sheets (Handout #27). Show the film.**

(For further information about conducting a value inquiry, see Lippitt, Fox, et al., *The Teacher's Role in Social Science Investigation* and F.R. and G. Shaftel, *Role Playing for Social Values.)*

Instructions to Participants (in your own words):

Read the Individual Reflection Sheet, to provide a frame of reference for viewing the film.

Objectives:

To confront participants with an unresolved classroom situation which serves as a stimulus for initiating inquiry activity.

HANDOUT #27: Individual Reflection Sheet

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

(a) Identify the values held by the teacher.

(b) Identify the pupils' values.

(c) Identify your own values and rank them (1=highest, 6=lowest) in order of priority.

(d) What relationships do you see between the pupils' values and their actions?

(e) Based on what you know about the teacher's values, what do you predict her behavior will be?

(f) Based on your identified values and priorities, what would you do in this situation?

(g) What do you foresee are the possible consequences of the teacher behaviors which you predicted?

(h) What do you foresee are the possible consequences of the way you would behave in this situation?

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 10:	**INDIVIDUAL REFLECTION**
Allow:	**20 minutes**
Materials:	**Handout #27 (p. 24)** **pencils**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Now that you have seen the film, reflect upon and answer the questions on this sheet.

Objectives:

To provide practice in identification of values, both one's own and those of others.

To increase awareness of the relationship between values and behavior and the implications of this relationship.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 11: **GROUP DISCUSSION**

Allow: **20 minutes**

Materials: **Handout #27 (p. 24)**

How to Proceed: **(see instructions to participants)**

Instructions to Participants (in your own words):

Begin by focusing the discussion on your responses to (a), (b), (d), (e), and (g).

By all means share whatever you would like to of your responses to (c), (f), and (h).

Objectives:

To provide practice in identification of values, both one's own and those of others.

To increase awareness of the relationship between values and behavior and the implications of this relationship.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 12:	**THEORY INPUT ON DESCRIPTION, INFERENCE, AND VALUE JUDGMENT**
Allow:	15 minutes
Materials:	Handout #28 (p. 32)

How to Proceed:	Distribute handout among participants.

Instructions to Participants (in your own words):

Read and discuss the handout.

Objectives:

To provide background needed to make distinctions basic to value inquiry.

HANDOUT #28: Distinguishing Among Descriptions, Inferences, Value Judgments*

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Description:

1. What you observe exactly.
2. Stated exactly as it happened without elaboration.
3. What really did take place?
4. What exactly was said?
5. Objectivity.

Inferential:

1. "Supposes" and guesses about situations.
2. Exploring behavior beyond actual observation.
3. What were his feelings?
4. What were his intentions?
5. Interview role players to find out their inside feelings.
6. Statement of what is likely or possible.

Value Judgments:

1. Deciding whether behavior is good or bad, right or wrong.
2. Opinions related to whether things are good or bad, right or wrong.
3. Statement about what inside forces cause certain behavior.
4. Statements about values held by individuals.

*distinguishing criteria determined by workshop participants during a Summer 1969 workshop at Franklin School, Syracuse, N.Y.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 13: **PRACTICE SESSION MAKING DISTINCTIONS AMONG DESCRIPTION, INFERENCE, AND VALUE JUDGMENT**

Allow: 25 minutes

Materials: MACOS booklet *Songs and Stories:* "Old Kigtak," p. 43; "Hunger," p. 60

How to Proceed: Distribute booklets among participants.

Instructions to Participants (in your own words):

Read each passage. Then identify descriptive statements and make inferences and value judgments about the passages.

Objectives:

To provide practice in making distinctions basic to value inquiry.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 14: **DISCUSSION OF GUIDELINES FOR HANDLING VALUE INQUIRY**

Allow: **25 minutes**

Materials: **Handout #29 (pp. 38-39)**

How to Proceed: **[illegible] handout among participants.**

Instructions to Participants (in your own words):

Read the handout. Then talk about the teacher's role in value inquiry.

Objectives:

To make explicit the role of the teacher in conducting a value inquiry.

HANDOUT #29: Guidelines for Handling Value Inquiry

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

1. Teacher's role is that of
   - (a) facilitator (giving each child opportunity to speak—protecting the right of a child to have views different from others).
   - (b) clarifier (helping children to express *their* values and *their* feelings and ideas).
   - (c) summarizer (helping children to organize their proposals).
2. Teacher's role is to
   - (a) involve the children.
   - (b) encourage interaction.
   - (c) help children clarify *their* ideas.
   - (d) trust children to *draw their own conclusions* as to what is a good or poor solution to the human problem involved.
   - (e) remain non-judgmental.
3. Teacher attempts to help each child
   - (a) become aware of the values he has learned.
   - (b) make progress toward understanding the reasons for his values.
   - (c) become aware of how to use his values when confronted with choices.
   - (d) understand how choice relates to consequences.
   - (e) understand what value alternatives exist for others.
4. Teaching goal is *not* to settle upon a *solution*. It is to give practice in decision-making and to help each child to clarify his own values. Children are helped to grow in their ability to anticipate consequences in their sensitivity to feelings in self and others, in their skill in generating reasonable alternatives.

5. Vital to value inquiry is the right climate: a climate where pupils realize that they are not expected to come up with the "right" answer.

   Value inquiry is not a procedure for indoctrinating the children with the values that you, as a particular adult, want them to accept.

CROSS-CULTURE PERSPECTIVE THROUGH VALUE INQUIRY

Step 15:	**APPLICATION OF VALUE STUDY TO MACOS**
Allow:	**3-5 minutes**
Materials:	**MACOS booklet *Songs and Stories:* "Old Kigtak," p. 43** **tape-recording and playback equipment (if story is recorded)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

I will now read you a story.

(The story may be on tape, for dramatic effect, or you may read it "live.")

Objectives:

To introduce a value inquiry—a controversial issue—in the MACOS curriculum.

CROSS-CULTURE PERSPECTIVE THROUGH VALUE INQUIRY

Step 16a:	**"KIGTAK" (FILM): INTRODUCTION**
Allow:	**3 minutes**
Materials:	**None**
How to Proceed:	**(see instructions to participants)** **NOTE: As a prerequisite to making your introductory statement, be sure you have read MACOS *Seminars for Teachers*, #15, p. 100, and *Talks to Teachers*, "World View."**

Instructions to Participants (in your own words):

We are about to see a classroom situation on film, dealing with the teaching of values. The vehicle through which values are taught is the story of Kigtak, with which you are now familiar.

Earlier we focused on the issue of teaching values in rather general terms. Now we narrow our focus to the question of how to teach values most effectively. In other words, we will deal more with the mechanics of the lesson.

We begin by seeing a portion of the film. At a certain point, it will be stopped and you will be asked to reflect upon what you have seen.

Objectives:

To observe and to study critically a value inquiry/controversial class.

To understand the complexity of this kind of classroom activity.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 16b:	**FILM VIEWING (TO FIRST FADEOUT)**
Allow:	**8 minutes**
Materials:	**"Kigtak" (MACOS film)** **projector**
How to Proceed:	**Group participants before starting the film. Write questions on the board (see instructions to participants).** **Show the film up to the first fadeout.**

Instructions to Participants (questions to write on board):

How did the teacher initiate a value inquiry discussion?

Do you agree or disagree with his technique?

In teaching this lesson in your classroom, what would you do next?

Objectives:

To observe and to study critically a value inquiry/controversial class.

To understand the complexity of this kind of classroom activity.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 16c:	**DISCUSSION OF FIRST PART OF FILM**
Allow:	**5-8 minutes**
Materials:	**Questions written on board (Step 16b)**
How to Proceed:	**Have groups consider questions on board, then bring them together for a total group reporting session.**

Instructions to Participants (in your own words):

Each group is to use the questions on the board (Step 16b) as lead questions for group discussion.

Objectives:

To observe and to study critically a value inquiry/controversial class.

To understand the complexity of this kind of classroom activity.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 16d:	**FILM VIEWING TO SECOND FADEOUT**
Allow:	**8 minutes**
Materials:	**film** **projector**
How to Proceed:	**Write the second set of questions on the board (see instructions to participants).** **Show the film up to the second fadeout.**

Instructions to Participants (questions to write on board):

Did the teacher require the children to vote on this issue?

Do you feel this is appropriate in dealing with this issue?

If you were the old woman, Kigtak, how would you feel that the problem should be resolved?

If you were Arfek, how would you feel?

As a twentieth-century American, how do you feel?

Objectives:

To observe and to study critically a value inquiry/controversial class.

To understand the complexity of this kind of classroom activity.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 16e:	**DISCUSSION OF FILM**
Allow:	**10-15 minutes**
Materials:	**Questions written on board (Step 16d)**
How to Proceed:	**Seek small-group interaction, followed by total group reporting, as before.**

Instructions to Participants (in your own words):

Each group is to use the questions on the board (Step 16d) as lead questions for group discussion.

Objectives:

To observe and to study critically a value inquiry/controversial class.

To understand the complexity of this kind of classroom activity.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 17:	**CONSTRUCTION OF VALUE INQUIRY LESSON**
Allow:	**30 minutes**
Materials:	**all MACOS materials used in this module** **paper** **pencils**
How to Proceed:	**In groups of four, continue with lesson plan task (see instructions to participants).**

Instructions to Participants (in your own words):

Based on your answers to, and feelings about, the preceding questions and issues, write down your ideas on how you would proceed to introduce this lesson and how you would get children into a value inquiry frame of mind.

Objectives:

To develop specific "start-up" procedures and techniques for using value inquiry–controversial topic in a classroom.

CROSS-CULTURAL PERSPECTIVE THROUGH VALUE INQUIRY

Step 18:	**SHARING AND DISCUSSION OF LESSONS**
Allow:	**30 minutes**
Materials:	**lesson plans (Step 17)**
How to Proceed:	**Provide opportunity for some of the prepared ideas to be shared, thus stimulating a continuing discussion on the appropriateness and effect of the teaching procedures.**

Instructions to Participants (in your own words):

None

Objectives:

To provide experience with a controversial topic (value inquiry) typical of the MACOS curriculum.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. What do you consider to be crucial aspects of the role of the teacher in conducting a value inquiry?

2. How competent would you feel in conducting a value inquiry? (Rank according to scale.)

1	2	3	4	5	6
not at all competent					extremely competent

Why?

Why not?

3. How comfortable would you feel in conducting a value inquiry?

1	2	3	4	5	6
not at all comfortable					extremely comfortable

Why?

Why not?

4. In what way, if any, did you incorporate the material "Distinguishing Among Descriptions, Inferences, Value Judgements" as you planned your value inquiry?

Why?

Why not?

ED 084256

PROCESS EDUCATION FOR TEACHERS

MODULE 11

ROUND ROBIN
PROBLEM SOLVING

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for materials used in conjunction
with this module

Emily Girault, Robert Fox, et al., *Inservice Workshop in Inquiry Teaching for Social Studies Teachers,* Round Robin Practice in Inquiry (Wabash Valley Education Center, Lafayette, Indiana)

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RATIONALE

The *Man: A Course of Study* (MACOS) curriculum was specifically designed to engage the learner actively in exploring questions that are of interest to him. That is, the learner is encouraged to become a social science investigator or inquirer. Legitimate areas for investigation include the analysis of his own behavior and of the effects of his behavior on others.

This module was designed to present one method or sequence which can be used to (1) explore questions of interest, (2) analyze one's own behavior, and (3) give and receive feedback about the effects of behavior.

The module also provides workshop participants with an initial experience with one type of value inquiry, and focuses attention on the actual instructional management behaviors required for each phase of inquiry.

OBJECTIVES

To provide further practice and experience with inquiry behavior.

To focus attention on instructional management behaviors needed for inquiry, and to provide opportunity to practice these behaviors.

To provide practice in (1) observing a group, (2) diagnosing group effectiveness, and (3) giving and receiving feedback.

TO PREPARE FOR THIS MODULE

READ the five-part, five-phase Handout #30 (pp. 9-59) and Handout #31 (pp. 62-63).

PREPARE these handouts for distribution among participants.

ASSEMBLE these materials:
- chart paper
- magic markers
- masking tape

ROUND ROBIN PROBLEM SOLVING

Step 1:	**GENERAL DIRECTIONS**
Allow:	**3 minutes**
Materials:	**Handout #30 (pp. 9-59), distributed among participants (NOTE: each member of each group of five receives his own handout, labeled "A," "B," "C," "D," or "E")**
How to Proceed:	**Divide participants in groups of five and distribute the handouts. Assign participants' roles as shown below:**

	Rounds –	1	2	3	4	5
Participants –	A	DL	D	O	R	T
	B	D	O	R	T	DL
	C	O	R	T	DL	D
	D	R	T	DL	D	O
	E	T	DL	D	O	R

DL: Discussion Leader
D: Discussant
O: Observer
R: Recorder
T: Timekeeper

Instructions to Participants (in your own words):

Form into groups of five. Each of you is receiving a Round-Robin Problem-Solving Package which specifies your role in each round.

The recorder for each round should record group data on the chart paper.

The exercise includes five phases, each divided into two parts: (1) group work and (2) feedback from the observer.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

HANDOUT #30: Round-Robin Problem-Solving Package

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

The package is divided into five sections, each in turn divided into five phases.

The five sections are marked for participants A, B, C, D, and E in each group of five. Roles of these participants within the group shift in the course of the five phases of the exercise (see chart, p. 6).

Observation guidelines for each phase should not be made available to group members until the observer feedback period for the phase.

HANDOUT #30: Participant A

PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the *discussion leader* in this phase. Your specific tasks are to:

- involve each discussant in the effort to explain the passage.
- avoid communicating any of your own evaluation or judgment of the ideas expressed.
- discourage the discussants' evaluation of each other's ideas.
- work to get as many *different* ideas as possible.
- prevent pursuit or exploration of any one idea.

Participant A (cont.)

These are the guide questions the observer used to watch the discussion leader:

Did the discussion leader:

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed–verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant A (cont.)

PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas, and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the *three* ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which–whether proven or disproven–would allow the greatest gain in information.

You are one of the three discussants in this phase. Try to participate as actively as possible in the task of the group.

Participant A (cont.)

These are the guide questions the observer used in this phase.

Did the discussion leader:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

Participant A (cont.)

PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: what is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE: After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are the *observer.* Observe the entire group this time, looking for evidence on the following questions:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples—what did the discussion leader actually *do* or *say?* What did the leader or discussants do that seemed particularly helpful to achieving the goals of this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

Participant A (cont.)

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

Participant A (cont.)

PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on *one* hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several *action steps* you might take to determine the validity of your hypothesis.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion; you are also asked to serve as *recorder* for your group. Record the hypothesis statement your group agrees on. List the action steps the group selects as tests for the hypothesis.

Participant A (cont.)

These are the guidelines the observer used in this phase.

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

Participant A (cont.)

PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the *value patterns* and *behavior norms* of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You have two jobs in this round:

You are to participate as actively as possible in the discussion; you are also asked to serve as timekeeper.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin." Take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

Participant A (cont.)

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT #30: **Participant B**

PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the discussant in this phase. Try to participate as actively as possible in the task of the group.

Participant B (cont.)

These are the guide questions the observer used to watch the discussion leader:

Did the discussion leader:

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed–verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant B (cont.)

PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas, and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the *three* ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which–whether proven or disproven–would allow the greatest gain in information.

You are the *observer* in this round. You should direct your attention to the discussion leader. Does he:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples–what did the discussion leader actually *do* or *say?* What did the leader or discussants do that seemed particularly helpful to achieving the goals of this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

Participant B (cont.)

These are the guide questions the observer used in this phase.

Did the discussion leader:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

Participant B (cont.)

PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE: After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion;

You are also asked to serve as *recorder* for your group–note briefly the supporting evidence cited for each idea.

Participant B (cont.)

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on *one* hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several *action steps* you might take to determine the validity of your hypothesis.

You have two jobs in this round:

You are to participate as actively as possible in the discussion: You are also asked to serve as timekeeper.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin." Take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

Participant B (cont.)

These are the guidelines the observer used in this phase:

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

Participant B (cont.)

PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the *value patterns* and *behavior norms* of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the *discussion leader* in this round:

1. You are to keep the group working on the task.
2. Encourage and support the participation of each discussant.
3. Try to increase the interest and involvement of the group in this task.
4. Listen, use paraphrasing, clarify question, etc. to keep discussion from getting bogged down.
5. Help group develop norm of being free to express value positions which differ from those held by others.

Participant B (cont.)

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT #30: Participant C

PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the *observer.*

Did the discussion leader

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed—verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant C (cont.)

These are the guide questions the observer used to watch the discussion leader.

Did the discussion leader:

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed–verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant C (cont.)

PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas, and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the *three* ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which–whether proven or disproven–would allow the greatest gain in information.

You are discussant and recorder.

Record the three ideas your group selects.

Participant C (cont.)

These are the guide questions the observer used in this phase.

Did the discussion leader:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

Participant C (cont.)

PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE: After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You have two jobs in this round.

1. You are to participate as actively as possible in the discussion.
2. You are also asked to serve as timekeeper. The group will have five minutes for the discussion period and five minutes for the feedback period. You should let the group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin." Take this as your starting point and watch for the two-minute and one-half minute intervals from that point.

Participant C (cont.)

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

Participant C (cont.)

PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on *one* hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several *action steps* you might take to determine the validity of your hypothesis.

You are the *discussion leader* in this round. Your job is to:

1. Move the group into a brainstorm session for Part I of this period.
2. Listen to what the discussants are saying:
    a. Clarify.
    b. Paraphrase.
    c. Do not push any one idea–in general facilitate the discussion.
3. Try to get the group going without prodding questions; wait for participants' responses; do not fill in periods of silence.
4. Be supportive and encouraging.

Participant C (cont.)

These are the guidelines the observer used in this phase.

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

Participant C (cont.)

PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the *value patterns* and *behavior norms* of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are a *discussant* in this phase.

Participate as actively as possible.

Participant C (cont.)

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT =30: Participant D

PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion.

You are also asked to serve as *recorder* for your group—making a list of all the ideas the group produces.

Participant D (cont.)

These are the guide questions the observer used to watch the discussion leader.

Did the discussion leader:

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed–verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant D (cont.)

PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the *three* ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which–whether proven or disproven–would allow the greatest gain in information.

You have two jobs in this round:

You are to participate as actively as possible in the discussion; you are also asked to serve as *timekeeper*.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin." Take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

Participant D (cont.)

These are the guide questions the observer used in this phase.

Did the discussion leader:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

Participant D (cont.)

PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are the discussion leader. Your role is to be a facilitator rather than a leader. Your specific tasks are:

1. See that the ground rule is observed. (If someone else doesn't start the discussion right away, you should get the group started by *briefly* stating your own view.)
2. Work to see that every discussant participates. Try to do this as non-directively as possible: nonverbal cues are helpful here–turning to someone, looking at someone, even signaling if necessary.
3. Keep the group to the task of searching for evidence which supports the hypotheses.
4. See that the participants talk to each other, instead of channeling their remarks through you.
5. If long, involved contributions are making it difficult for the next speaker to summarize and reflect back, call this to the attention of the group.

Participant D (cont.)

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

Participant D (cont.)

PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on *one* hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several *action steps* you might take to determine the validity of your hypothesis.

You are one of the three discussants in this phase.

Try to participate as actively as possible in the task of the group.

Participant D (cont.)

These are the guidelines the observer used in this phase.

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

Participant D (cont.)

PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the *value patterns* and *behavior norms* of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the *observer*. Try to give the discussion leader feedback on these questions:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

Participant D (cont.)

These are the guidelines the observer used in this phase:

1. Did the DL keep the group working on the task?
2. Seem to encourage and support the participation of each discussant?
3. Try to increase the interest and involvement of the group in this task? (How?)
4. Appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT #30: Participant E

PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You have two jobs in this round:

You are to participate as actively as possible in the discussion.

You are also asked to serve as *timekeeper.* The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods. So that all groups may begin together, the workshop leader will announce "Begin." Take this as your starting point and watch for the two-minute and one-half minute interval from this point.

Participant E (cont.)

These are the guide questions the observer used to watch the discussion leader.

Did the discussion leader:

(1) Make an effort to involve each discussant in the hypothesizing process?

(2) Communicate evaluation or judgment of the ideas expressed–verbally or nonverbally?

(3) Discourage participants' expression of judgment and evaluation of each other's ideas?

(4) Appear to be really listening to comments of participants? Convey interest in their comments?

(5) Feel pressed to fill in silent periods with his own talk? Was he able to wait for discussant to comment?

(6) Work to get as many different ideas as possible?

(7) Prevent pursuit or exploration of any one idea?

Participant E (cont.)

PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas, and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the *three* ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which—whether proven or disproven—would allow the greatest gain in information.

You are the ***discussion leader*** in this phase. Your tasks are to:

(1) direct the group in reviewing its list of hunches and in eliminating repetitive and less relevant ideas.

(2) turn the discussants' attention to testing the feasibility of the explanatory ideas.

(3) work toward clarification of ideas and mutual understanding among the discussants.

(4) direct the group's efforts to a comparison of preferred explanations.

(5) encourage the discussants' interaction and dialogue with each other.

(6) ask for, and encourage discussants to ask for, supportive rationale for each feasibility statement or estimate. (What leads you to that conclusion?)

(7) test the consensus of the group in its selection and refinement of the explanatory ideas. (How do the rest of you feel about this? Does the group agree on this?)

Participant E (cont.)

These are the guide questions the observer used in this phase.

Did the discussion leader:

(1) press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean . . .? Is that statement clear to all of you?)

(2) encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea," are there others on the list that should be eliminated?)

(3) ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

(4) encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

(5) test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

Participant E (cont.)

PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are one of the three discussants in this phase. Try to participate as actively as possible in the task of the group.

Participant E (cont.)

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

Participant E (cont.)

PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on *one* hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several *action steps* you might take to determine the validity of your hypothesis.

You are the *observer* in this round.

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples: What did the discussion leader actually *do* or *say?* What did the leader or discussants do that seemed particularly helpful to achieving the goals of this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

Participant E (cont.)

These are the guidelines the observer used in this phase.

Does the discussion leader:

(1) *listen* to what discussants are saying?

(2) seem pressed to "fill in" all of the silent periods with his own talk or with prodding questions? Can he *wait* for participants' responses?

(3) seem supportive and encouraging to the participants?

(4) convey a sense of being personally interested in the group's problem?

(5) move the group into a brainstorm session for one part of this period?

Participant E (cont.)

PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the *value patterns* and *behavior norms* of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the *recorder* in this round. Record those value patterns and behavior norms listed by your group as best describing the culture.

You are also a *discussant*.

Participant E (cont.)

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be *listening* to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

ROUND ROBIN PROBLEM SOLVING

Step 2:	**READING HISTORIC DOCUMENT**
Allow:	**5 minutes**
Materials:	**Handout #31 (pp. 62-63)**
How to Proceed:	**Distribute the handout to participants.**

Instructions to Participants (in your own words):

Read the historical document.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

HANDOUT #31: Historic Document: The Old Man with the Broken Arm*

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

At ______________ an old man—four-score and eight:
The hair on his head and the hair of his eyebrows—white as the new snow
Leaning on the shoulders of his great-grandchildren, he walks in front of the Inn;
With his left arm he leans on their shoulders; his right arm is broken.
I asked the old man how many years had passed since he broke his arm,
I also asked the cause of the injury, how and why it happened?
The old man said he was born and reared in the District of __________;
At the time of his birth—a wise reign; no wars or discords.
"Often I listened in the Pear-Tree Garden to the sound of flute and song;
Naught I knew of banner and lance, nothing of arrow or bow.
Then came the wars of T___________ and the great levy of men;
Of three men in each house, —one man was taken.
And those to whom the lot fell, where were they taken to?
Five months' journey, a thousand miles—away to ______________.
We heard it said that in __________ there flows the __________ River.
As the flowers fall from the pepper-trees, poisonous vapours rise.
When the great army waded across, the water seethed like a cauldron;
When barely ten had entered the water, two of three were dead.
To the north of my village, to the south of my village the sound of weeping and wailing,
Children parting from fathers and mothers; husbands parting from wives.
Everyone says that in expeditions against the ___________ tribes
Of a million men who are sent out, not one returns.
I, that am old, was then twenty-four;
My name and fore-name were written down in the rolls of the Board of War
In the depth of the night not daring to let any one know
I secretly took a huge stone and dashed it against my arm.
For drawing the bow and waving the banner now wholly unfit,
I knew henceforward I should not be sent to fight in ___________.

Bones broken and sinews wounded could not fail to hurt,
I was ready enough to bear pain, if only I got back home.
My arm—broken ever since: it was sixty years ago.
One limb, although destroyed, —whole body safe!
But even now on winter nights when the wind and rain blow
From evening on till day's dawn I cannot sleep for pain.
Not sleeping for pain Is a small thing to bear,
Compared with the joy of being alive when all the rest are dead.
For otherwise, years ago, at the ford of ___________ River
My body would have died and my soul hovered by the bones that no one gathered.
A ghost, I'd have wandered in ___________, always looking for home.
Over the graves of ten thousand soldiers, mournfully hovering."
So the old man spoke, And I bid you listen to his words
Have you not heard
That the Prime Minister of K______________
Did not reward frontier exploits, lest a spirit of aggression should prevail? And have you not heard
That the Prime Minister of T______________
Desiring to win imperial favour, started a frontier war?
But long before he could win the war, people had lost their temper.
Ask the man with the broken arm in the village of ______________!

---

*This is an ancient Chinese manuscript.

ROUND ROBIN
PROBLEM SOLVING

Step 3:	**PHASE I: BRAINSTORMING**
Allow:	**13 minutes** **general directions (sheet 1) –3 minutes** **task (sheet 1) –5 minutes** **observer feedback (sheet 2) –5 minutes**
Materials:	**Handout #30 (pp. 9-59)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Follow the directions in your package for Phase I.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

ROUND ROBIN PROBLEM SOLVING

Step 4:	**PHASE II: HYPOTHESIS SELECTION**
Allow:	**13 minutes** **general directions (sheet 1) –3 minutes** **task (sheet 1) –5 minutes** **observer feedback (sheet 2) –5 minutes**
Materials:	**Handout #30 (pp. 9-59)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):
Follow the directions in your package for Phase II.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

ROUND ROBIN PROBLEM SOLVING

Step 5:	**PHASE III: EVIDENCE SEARCH**
Allow:	**13 minutes** **general directions (sheet 1) –3 minutes** **task (sheet 1) –5 minutes** **observer feedback (sheet 2) –5 minutes**
Materials:	**Handout #30 (pp. 9-59)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Follow the directions in your package for Phase III.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

ROUND ROBIN PROBLEM SOLVING

Step 6:	**PHASE IV: HYPOTHESIS TESTING**
Allow:	**13 minutes** **general directions (sheet 1) –3 minutes** **task (sheet 1) –5 minutes** **observer feedback (sheet 2) –5 minutes**
Materials:	**Handout #30 (pp. 9-59)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Follow the directions in your package for Phase IV.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

ROUND ROBIN PROBLEM SOLVING

Step 7: **PHASE V: VALUE ANALYSIS**

Allow: **13 minutes**
general directions (sheet 1) –3 minutes
task (sheet 1) –5 minutes
observer feedback (sheet 2) –5 minutes

Materials: **Handout #30 (pp. 9-59)**

How to Proceed: **(see instructions to participants)**

Instructions to Participants (in your own words):

Follow the directions in your package for Phase V.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

ROUND ROBIN PROBLEM SOLVING

Step 8: **GROUP DISCUSSION**

Allow: **25 minutes**

Materials: **charts generated during each of the five phases of the exercise**

How to Proceed: **Group discussion focuses on the charts generated by each group during the problem-solving sequence.**

Instructions to Participants (in your own words):

Our discussion should relate the charts–the data generated–to the group process and to the processes involved in the problem-solving sequence.

Objectives:

To focus attention on actual instructional behavior required by the various phases of inquiry.

To provide each participant with some practice in instructional behavior supportive of each phase of inquiry.

To provide practice in observing a group involved in inquiry, in diagnosing its effectiveness, and in reflecting these observations to the group.

To provide initial experience with one type of value analysis.

FEEDBACK

NOTE: These are sample questions, designed to elicit feedback from participants. Feedback questions in other modules may also be adapted to this one.

1. Rate the effectiveness of the Round-Robin inquiry practice in focusing your attention on actual instructional behavior required by the various phases of inquiry.

1	2	3	4	5	6
not at all effective					extremely effective

Why?

Why not?

2. How comfortable did you feel when giving feedback in your role as process observer?

1	2	3	4	5	6
not at all comfortable					extremely comfortable

Why?

Why not?

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PROCESS EDUCATION FOR TEACHERS

MODULE 12

SIMULATION

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RATIONALE

Several simulations are involved in the *Man: A Course of Study* (MACOS) curriculum. These simulations place participants in different situations and in different behavior and role frames. In a simulation the participant can make a decision, carry it out, and see the results of his actions. The attempts to resolve the problems and conflicts created by this new situation require the application of a number of process skills already introduced in this workshop design.

OBJECTIVES

To place participants in different conditions and situations in order for them to utilize and extend the process skills, roles, and behaviors and the MACOS learning developed in the workshop.

To provide more experience with, and a study of, a MACOS instructional device: simulation.

To demonstrate that the concept of simulation can be an operating model for the study of a social situation.

TO PREPARE FOR THIS MODULE

READ Handout #32 (p. 8) and #33 (p. 12).

PREPARE these handouts for distribution to participants.

READ MACOS, Teacher Guide, Book 7, Section II, Lesson C (Directions for Game).

HAVE on hand for distribution copies of MACOS booklet *Journey to the Arctic.*

PREPARE these materials (from game directions):
    seal-hunting boards
    seal-meat stickers
    seal-hunting record sheets

SIMULATION

Step 1:	**INTRODUCTION TO SIMULATION WHAT IS SIMULATION? WHAT ARE THE KEY ELEMENTS OF A SIMULATION DESIGN?**
Allow:	**10 minutes**
Materials:	**Handout #32 (p. 8)** **MACOS booklet *Journey to the Arctic***
How to Proceed:	**Distribute handout among participants.**

Instructions to Participants (in your own words):

Read the handout.

Objectives:

To introduce the concept of simulation games as differentiated from role-playing.

To illustrate (model) appropriate teacher roles when simulations are used as learning devices.

To provide an example of alternative ways of teaching a concept (social organization).

HANDOUT #32: What Is a Simulation?

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Simulations, as used in MACOS, are operating models of social situations or processes. The model is constructed by means of analyzing the significant variables which make up the processes to be illustrated. Those variables which are considered most significant are built into a game situation. Obviously the criteria employed in the selection process of these variables are crucial, for all of the variables can never be identified or isolated. Even if this goal were achieved, the wide range of variables in the simulation would make it unmanageable.

In incorporating the variables, practical decisions about the components of a game setting have to be made—these involve a translation and substitution process. As an example, in the "Seal Hunt" game it would not be practical to have real ice and live seals, nor is it necessary in terms of the game objectives. Therefore, a game board and meat stickers substitute for the real environment. Reality, then, is represented; simulations themselves are not reality. However, consonant with the principles of simulation, these representations of reality must function in a manner analogous to their "real" life functions.

In playing a simulation game, players usually take roles. In the "Seal Hunt," the players represent Eskimo seal hunters. It is important to make a distinction between the roles assumed in the simulated setting and what is usually referred to as role playing. While engaged in a simulation, the players are not "acting out" a situation, but rather they are "acting upon" the situation. The important distinction is that there is an active decision-making element involved in a simulation that is not required in role play.

The teacher, in using simulation as an instructional device, must have a clear conception of the roles (processes) being modeled. He must also constantly cause students to analyze and to question the validity of the model that they evolve through successive plays. This focus must be maintained throughout the activity in order to maintain the integrity of simulation as an instructional technique.

SIMULATION

Step 2: **INTRODUCTION TO A SEAL HUNT SIMULATION HUNTING SEAL ON THE ICE OF PELLY BAY**

Allow: 15 minutes

Materials:

Handout #33 (p. 12)
MACOS, Teacher Guide, Book 7,
  Section II, Lesson C (game rules)
seal-hunting boards
seal-meat stickers
seal-hunting record sheets

How to Proceed: Before starting to play the simulation, have participants discuss the suggestions contained in Handout #33.

9/

Instructions to Participants (in your own words):

Read Handout #33 and the game rules. Questions to be considered when using this simulation are:

Is this model valid? Are the variables selected for inclusion in the simulation the most appropriate in terms of game objectives? Is the seal hunt an accurate reflection of reality? How would you evaluate student learnings?

(Read game directions aloud to participants.)

Objectives:

To provide a basis for evaluating simulation games and the use of games as a means of increasing effective identification with the Eskimos.

To provide familiarity with a specific simulation in the MACOS curriculum.

HANDOUT #33: Suggestions for Using Simulations in the Classroom

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

1) On the first playing of a simulation *briefly* explain the game rules then let the students play through the game. Do not be concerned with making fine distinctions in terms of the rules.

2) The teacher should not suggest game strategies to the students. Simulations are unique in that they offer the learner an opportunity to manipulate and act upon an environment and see the results of his actions.

3) Printed game rules are not inviolate. So long as they do not violate the basic model of the game, students should be allowed and encouraged to manipulate the rules.

4) Research has shown that it is essential for the teacher to get feedback from students as to why they developed the strategies they did in playing the simulation. This can be done by discussing game record sheets, student description of the strategies they followed, etc.

5) The students' understanding of the purpose of specific rules and design elements in the game, in terms of their relation to the real-life situation, is a good indication of their knowledge of the concepts being taught in the simulation. (e.g., Why are there so many seal breathing holes?)

6) Follow-up discussions should be an integral part of teaching with simulations. The discussion should attempt to relate the game to its real-life counterpart. The teacher should probe, not expound.

7) Several playings of most simulations are necessary if the learner is to develop, assimilate, and internalize the concepts (processes) of the model. Therefore, the teacher needs to pace the playing of the game so that students do not become bored with or tired of the game too quickly.

SIMULATION

Step 3:	**PLAYING THE SEAL HUNT SIMULATION WITH PARTICIPANTS IN THE ROLES OF NETSILIK SEAL HUNTERS**
Allow:	45 minutes
Materials:	MACOS, Teacher Guide, Book 7, Section II, Lesson C seal-hunting boards seal-meat stickers seal-hunting record sheets
How to Proceed:	Do *not* suggest game strategies. Clarify the procedural elements of the game, but do so sparingly. Assist with rules organization only if you must, and even then respond as little as possible. Do not offer any directions or suggestions relative to the goals of the simulation.

Instructions to Participants (in your own words):

Refer to the rules given in the Teacher Guide (readily available to all participants).

Objectives:

To develop and test alternative problem-solving strategies, with emphasis on the reality of environmental factors in Eskimo life.

SIMULATION

Step 4: **POST-GAME FOLLOW-UP EVALUATION OF SEAL HUNT STRATEGIES, SIMULATION, PROCEDURES, AND METHODS OF USING THE SEAL HUNT IN A CLASSROOM**

Allow: **10 minutes**

Materials: **used hunting record sheets**

How to Proceed: **Repeat and discuss the initial questions in the module (see p. 17). Then try to find out from participants the type of social organization they think (hypothesize) would evolve around this kind of survival activity. Use record sheets to examine results in groups and then in the total class, in order to develop workable strategies. Emphasize the process, not the number of kills or the number who die. Relate these results to Eskimo environmental reality. Probe to get at the values which might possibly exist in this type of hunting culture. The entire group is to pose hypotheses on how Netsilik Eskimos have developed an adaptive pattern.**

Instructions to Participants (in your own words):

Is this model valid? Are the variables included in the simulation the most appropriate in terms of game objectives? Is the seal hunt an accurate reflection of reality? How would you evaluate student learnings?

Would strong individual leaders emerge in this culture? Is competition a characteristic which would emerge? Would conspicuous consumption be valued?

Review your record sheet and explain your hunting strategy.

Objectives:

To provide further experiences with group interaction skills and abilities.

To develop an appreciation of a variety of problem-solving strategies.

To provide a practice experience in a problem-solving activity.

SIMULATION

Step 5: **REVIEW OF SIMULATION AS A CLASSROOM INSTRUCTIONAL DEVICE**

Allow: **10 minutes**

Materials: **None**

How to Proceed: **Emphasize the fact that printed game rules are not inviolate. Children should be encouraged to change them as long as what they do accurately reflects the basic model. Pupil feedback is essential to learning with simulation games. (See "The Hunting Game: An Analysis of Learning by Simulation," *Curiosity, Competence, Community:* Man: A Course of Study, *an Evaluation,* II, 71-108.)**

Instructions to Participants (in your own words):

What if your students change the game rules? What are the criteria for rule changes? How do you evaluate what students have learned in playing this game?

Objectives:

To develop facility in using simulations as instructional devices.

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PROCESS EDUCATION FOR TEACHERS

MODULE 13

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TEACHING EXPERIENCE

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RATIONALE

The total design of the workshop is reflected in this module. All workshop activities had as their ultimate objective an understanding of the roles and behaviors needed to implement the *Man: A Course of Study* (MACOS) curriculum successfully. This culminating module gives participants opportunity to practice and refine these roles and behaviors.

Participants who have worked together throughout the workshop are teamed to offer each other support and reinforcement as they try out these new roles and behaviors.

Tasks are differentiated among team members, so that each person assumes either a teacher or an observer role during each lesson. Teacher and observer must interact as together they plan teaching objectives and devise or select instruments for observation which are congruent with these objectives. The team also designs instruments for student feedback, making possible a cross-check of observer data

Interaction occurs following each lesson, as team members practice giving and receiving feedback about the teaching-learning situation. Modification of teacher behavior, based on pupil and observer feedback, provides one means of sharing influence in the classroom.

Daily community sessions establish norms for sharing and for legitimizing classroom inventions.

To document the teaching experiences related to classroom methodology, classroom interaction, and MACOS content, each team completes a daily report. This documentation provides a basis for workshop participants to reflect about the teacher-learner-observer roles and behaviors. The value of the documentation process becomes evident as team members analyze the role behaviors involved in being a diagnostician, an inventor, a practitioner, an evaluator, an observer.

OBJECTIVES

To provide support for practicing and refining new roles and behaviors as classroom teachers and/or observers.

To utilize interpersonal communication skills in giving and receiving feedback.

To establish norms for documenting and sharing classroom experiences.

TO PREPARE FOR THIS MODULE

READ Handouts #34 (p. 14), #35 (p. 15), and #36 (p. 16).

PREPARE these handouts for distribution to participants.

TEACHING EXPERIENCE

Step 1:	**PRIOR ARRANGEMENTS**
Allow:	**one month (or more) prior to workshop**
How to Proceed:	**See Special Procedures for Step 1 (pp. 8-9).**

Objectives:

To inform workshop leaders of the logistical details and support services required for establishing the teaching situation.

SPECIAL PROCEDURES FOR STEP 1

Location

A school district that is already committed to the installation of the new program involved in the workshop is an appropriate contact for a school location. The school locale for the workshop must have a large walking population at the desired grade level, in order to insure the requisite number of students for the teaching/learning situation. Another factor to be considered in selection, if video or audio recordings are to be utilized, is the local noise factor and the classroom acoustics.

A statement clarifying and arranging the conditions involved in the workshop must be prepared and reviewed with the local school authorities. The use of children requires permission slips and insurance coverage for both participants and students. A statement of arrangements and considerations should be exchanged between the parties long before the beginning of the workshop.

Students

Since some consideration or support for the installation is being provided, the school should be willing to assist in organizing the workshop. An informational letter, asking for student participation, stating conditions, and acknowledging the activity as a school function, should be sent to the parents. The school office and/or workshop participants from that school can reinforce the request, so that an adequate population is assured. Each child must have a school permission slip signed by a parent. This should be completed before the end of the school term, if a summer workshop is planned. If television or audio tape is to be used in the future, then permission forms for this eventuality should be required. Remember, it is easier to make all of the arrangements and an allocation of responsibilities early, rather than to attempt it in the final flurry of activity when the school year ends.

Arrival procedures for students should be organized. A key decision is whether to use groups of friends (in order to sustain the voluntary attendance) or to obtain a random distribution. This decision should be based on local conditions. Since the teachers will not know the students, and not all the students will know each other, prepare and use name tags. Each of the rooms should be labeled, and participants should act as floor directors as long as necessary. If microteaching or small groups are to be employed, each student group should be composed of six to ten enrollees. It is desirable to form more groups, if the teaching/observation schema is to be implemented.

Rooms

A school is an ideal location because not only does it have classrooms, but it also provides a library which can be used by teachers and students. In order to increase the probability of reliable equipment and final product quality, a separate room should be set up for television or audio recording. Another room should be established as a resource/community center for the participants. This room can be a home base where materials, agendas, equipment, and so forth are centrally located. A workshop secretary can provide logistical assistance for the equipment, materials, typing, duplicating, and other such services that will be necessary for four or more active teaching stations. The secretary is a kev person for the rapid turnaround of daily feedback sheets and documentation reports. The school office, operated by a school secretary, will be another resource to utilize the assets of the building and to handle outside calls which will be relayed to the workshop secretary.

A school setting also provides easy access to an adequate quantity and diversity of audio-visual and other support equipment. A review of the sections of the modules headed "To Prepare for This Module" will provide data on the kind and quantity of equipment necessary. It is necessary to inspect and choose classrooms that have adequate shades, outlets, screens, and so forth.

TEACHING EXPERIENCE

Step 2: **PRE-TEACHING SUPPORT**

Allow: all workshop participants' time prior to teaching experience

How to Proceed: See Workshop Design section in PROCESS EDUCATION FOR TEACHERS: Introduction.pp.20-23.

Objectives:

To provide theoretical input, experience, and practice with the roles and behaviors demanded by process education.

TEACHING EXPERIENCE

Step 3:	**PREPARATION FOR TEACHING**
Allow:	**1 hour, two days prior to teaching**
Materials:	**Handouts ##34, 35, 36 (pp. 14-16), distributed among participants**

How to Proceed:	**See Special Procedures for Step 3 (p. 17).**

Instructions to Participants (in your own words):

Read the handouts, then take part in a discussion of the information.

Objectives:

To establish and discuss the conditions and constraints in operation during the teaching/learning situation.

HANDOUT #34: Classroom Teaching-Learning Situation

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

Participants are to be grouped in quartets. One pair of the quartet will plan and execute a MACOS lesson while the other pair plans and executes an observation schema based on the lesson. Quartet pairs are to rotate in the teacher/observer role.

Tasks for quartet members are:

1. Specifying teaching objectives.
2. Designing or selecting observation instruments to assess teacher effectiveness in meeting objectives.
3. Planning and executing teaching strategies (classroom methodology and interaction).
4. Planning and executing observation strategies.
5. Designing and administering student feedback instruments.
6. Giving and receiving feedback in quartets regarding teacher effectiveness in meeting objectives.
7. Sharing teaching practices with all workshop participants in community sessions and through documentation (see Handouts ##35 and 36).

HANDOUT #35: Documentation Guide for Teacher

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

I. Objectives of the lesson.

II. Rationale statement for objectives.

III. Materials used (include paste, paint, other supplies and also copies of all supplementary materials you have designed such as copy of student feedback sheet).

IV. Operating instructions (time allotment and topics).

V. Inferences and judgments based on descriptive data.

HANDOUT #36: Documentation for Observer

NOTE: This handout, in form suitable for reproduction, will be found in the Handouts section of the Process Education for Teachers package.

I. Objectives:

Specify teaching objectives as you understand them.
Specify data you will collect to assess these objectives.

II. Material and equipment used.

III. Observation techniques and instruments used (include copies of all instruments).

IV. Inferences and judgments based on descriptive data (with respect to techniques and instruments for observation).

SPECIAL PROCEDURES FOR STEP 3

The design for the teaching-learning situation focuses on the critical dimensions of the role of the teacher. The design allows participants to practice behaviors essential to functioning as diagnostician, inventor, practitioner, evaluator, observer, and sharer of classroom practices.

To provide a structure to practice these role behaviors the following guidelines were established.

Participants are grouped into quartets—two teams. One team is to plan and carry out a MACOS lesson, while the other team serves as observers. This task diversification demands:

(1) specifying teaching objectives.

(2) designing or selecting observation instruments to assess teacher effectiveness in meeting objectives.

(3) planning and executing teaching strategies (classroom methodology and interaction).

(4) planning and executing observation strategies.

(5) designing and administering student feedback instruments.

(6) giving and receiving feedback in the quartet regarding teacher effectiveness in meeting objectives.

(7) sharing teaching practices with all workshop participants, in community sessions and through documentation. (See documentation guides for teacher and observer, Handouts ##35 and 36.)

Planning time (2 hours minimum), teaching time (1½ hours), sharing time (1 hour) must be incorporated into workshop design.

Audio and/or video-taping, although not absolutely essential, provide valuable means for securing feedback.

TEACHING EXPERIENCE

Step 4:	**TEACHING EXPERIENCE**
Allow:	**1 ½ hours a day for two weeks**

Objectives:

To provide actual classroom experience for practicing and refining roles and behaviors.

TEACHING EXPERIENCE

Step 5:	**POST-TEACHING EXPERIENCE (QUARTET)**
Allow:	**½ hour daily**
Materials:	**Daily lesson plan–objectives** **Daily feedback sheets (pupil and observer)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Observers are to share data statements related to teaching objectives.

Objectives:

To practice giving and receiving feedback about the teaching/learning situation.

TEACHING EXPERIENCE

Step 6:	**POST-TEACHING EXPERIENCE (COMMUNITY: TOTAL GROUP)**
Allow:	**½ hour daily**
Materials:	**Daily lesson plan–objectives** **Daily feedback sheets (pupil and observer)**
How to Proceed:	**(see instructions to participants)**

Instructions to Participants (in your own words):

Participants are to share the teaching experience, including quartet feedback.

Objectives:

To document and share classroom inventions related to classroom methodology, classroom social interaction, and MACOS content.

TEACHING EXPERIENCE

Step 7: **SUPPORT DURING TEACHING**

Allow: **the entire workshop during the two-week teaching experience**

How to Proceed: **See Special Procedures A and B (pp. 26-27).**

Objectives:

To provide support and reinforcement for new roles and behaviors.

SPECIAL PROCEDURES FOR STEP 7: A

Interest Groups

During the first week of the teaching/learning situation, questions, problems, and needs arise from the experiences of each group. On the basis of anticipated needs, the workshop staff might set up and man interest centers in such areas as role-playing, value inquiry, grouping, questioning, and evaluation. The centers should be designed as resource stations that are open and available to the participants during their preparation time in the afternoons. A schedule of topics and days should be given to the participants. Participants could, if they feel the need, go to the resource person with their problems. The centers should not be designed as classes with formal presentations. By this procedure, the staff could hope to open dialogue with individuals on their concerns. This consulting service could be continued during the second week of the teaching experience module on an open-topic, open-time basis. This "service" orientation role-models the concept of the teacher as a resource, not a deliverer of information on a certain topic on a given day at the appointed hour. Both staff and participants have to learn communication cues and skills in order to make this procedure successful.

SPECIAL PROCEDURES FOR STEP 7: B

SUGGESTED RESOURCES

Role-Playing:

1. M. Chesler and R. Fox, *Role-Playing Methods in the Classroom* (Chicago: Science Research Associates, Inc., 1966).
2. F.R. Shaftel and G. Shaftel, *Role Playing for Social Values* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969).

Value Inquiry:

1. R. Lippitt, R. Fox, and L. Schaible, *The Teacher's Role in Social Science Investigation* (Chicago: Science Research Associates, Inc., 1969).
2. L. Raths et al., *Values and Teaching* (Columbus, O.: Charles E. Merrill, 1966).
3. F.R. Shaftel and G. Shaftel, *Role Playing for Social Values* (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1969).

Diagnosing the Classroom Learning Environment:

1. R. Fox, M.B. Luszki, and R. Schmuck, *Diagnosing Classroom Learning Environments* (Chicago: Science Research Associates, Inc., 1966).
2. R. Lippitt, R. Fox, and L. Schaible, *The Teacher's Role in Social Science Investigation.* (Chicago: Science Research Associates, Inc., 1969).

Evaluation:

1. "Finding Out What Students Have Learned," Seminar 12 in MACOS *Seminars for Teachers* (Cambridge, Mass.: Educational Development Corporation, 1970).
2. R. Lippitt, R. Fox, and L. Schaible, *The Teacher's Role in Social Science Investigation* (Chicago: Science Research Associates, Inc., 1969).

Questioning:

1. *"Minicourse III: Effective Questioning in a Classroom Discussion"* (Berkeley: Far West Laboratory for Educational Research and Development, 1969).

Grouping:

1. R. Lippitt, R. Fox, and L. Schaible, *The Teacher's Role in Social Science Investigation* (Chicago: Science Research Associates, Inc., 1969).
2. J. Olmstead, *Theory and State of the Small Group Methods of Instruction* (Alexandria: Human Resources Research Organization, 1970).

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PROCESS EDUCATION FOR TEACHERS

INSTRUCTIONAL MODULES

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FOREWORD

Education has reached a major turning point.

For as long as memory serves, it has been the business of schools to teach "right answers." It has been the business of the teacher to act as the authoritative repository for those answers. In a stable and unchanging—or very slowly changing—world, this was a logical role for education to play. We *had* some right answers.

But our world is changing rapidly now. The "right answers" may turn out to be quite wrong by the time today's pupil has grown to adulthood.

So we can no longer concern ourselves primarily with the content of education. Rather, we must place emphasis on the *process of learning*; for today's—and tomorrow's—children must have the resources for self-directed learning, beyond formal schooling, if they are to live productively and successfully in a world we cannot possibly predict.

The *Process Education for Teachers* workshop is designed to give teachers an understanding of the learning process, by placing them in the role of learners themselves; and then to give them an opportunity to put to use what they have learned, in a true-to-life classroom situation.

This introductory booklet should be read completely before any of the other materials, as an orientation to the package and to the workshop design.

LOGISTICS AND MECHANICS

The Eastern Regional Institute for Education, since it started operations in 1966, has been deeply involved in helping schools to try out, to demonstrate, and to put to use newly developed curricula. In the spring of 1969, National Science Foundation funded an ERIE proposal to establish a regional center for the installation and demonstration of *Man: A Course of Study* (MACOS), an upper-elementary social science curriculum.

The plan called for a campus team, composed of a college methods professor and a campus or collaborative teacher. This team would jointly design and conduct (a) a pre-service program for college elementary education students and (b) an in-service program for nearby school districts that wanted to implement the MACOS curriculum. The idea was not only to effect a change in the instructional program in public school classrooms, but also to alter the constructs, materials, and organization of college pre-service education courses.

The NSF grant enabled ERIE to establish a network of five colleges and forty public school classrooms in New York and Pennsylvania. Through other ERIE programs, an additional forty classrooms participated in the ERIE-MACOS regional center. A renewal by NSF for 1970-1971 enabled the network to expand to six more colleges and to service a few key public school districts. In all, the 1970-1971 network includes eleven colleges, thirty school districts, two hundred teachers, two hundred-fifty classrooms, and seven thousand pupils in five states (New York, Pennsylvania, Ohio, Michigan, and Massachusetts) and one Canadian province (Ontario).

During a summer workshop, the campus teams received training which enabled them to conduct more than twenty orientation and bi-weekly in-service classes during the year. The MACOS program director and consultants also visit each of the centers about once a month, to coordinate and monitor these efforts. In this way, a year-long support system has been provided for putting the curriculum into operation.

From its earlier experience in implementing curricula, ERIE had learned that a *de facto* set of conditions and requirements was absolutely necessary for success. Therefore a detailed set of specifications was drawn for each participating group: public school teachers, administrators, and pupils; college professors, administrators, and students; and campus school teachers, administrators, and pupils. Each college and public school taking part in the program acknowledged these conditions and requirements and agreed to their terms in a formal letter.

PREPARATION FOR THE WORKSHOP

The second MACOS summer workshop was held in the Syracuse area August 3 through 28, 1970. Support for participants was provided by NSF and ERIE. The Syracuse area was chosen so that resources–both human and material–from the ERIE home office could easily be called upon. The Syracuse location was convenient to reach, too, by both private and public transportation. And the resources of a large metropolitan area added to the desirability of holding the workshop there.

Housing for workshop participants was at the Manlius School, a private boarding school for boys. Ten of the fifteen participants, plus the program director and experienced campus team staff, were housed together. The other five participants brought their families or lived nearby and did not stay at the school.

Daytime classes were held at a suburban Syracuse public school district that planned to start using the MACOS curriculum in 1970-1971. One school in the district was a particularly good setting, since it offered an ample supply of rooms, audio-visual and office reproduction equipment, and an office staff. Moreover, many of the pupils attending this school live within walking distance. Since the workshop design called for at least twenty-four students every day for two weeks, it was imperative that the pupils have easy access to the school.

Workshop hours extended from 9 a.m. to about 4 p.m. daily. Two nights a week, evening sessions were held from 7:30 to 10:00 p.m. at Manlius Academy (usually Tuesday and Thursday). Nine of the fifteen participants were members of college teams from New York, Pennsylvania, and Michigan. The other six came from school districts in New York, Ohio and Ontario. The workshop staff consisted of the MACOS program director, two members of the ERIE professional development team, and two experienced campus team members.

Planning for the workshop had begun immediately upon notification by NSF of the grant to ERIE. Throughout the spring, the program was disseminated and colleges were selected. At this time, too, the MACOS program director made preliminary arrangements. He also worked with ERIE's professional development team and experienced campus team members in designing and refining workshop plans. Dr. Emily Girault, of the University of Pennsylvania Social Science Education faculty, was also a planning consultant.

Continued planning by the staff took place throughout the four-week workshop, at late-afternoon and evening sessions.

THE NEED TO MODIFY BEHAVIOR

A network of five college sites, eight school districts, and about two thousand pupils was organized by the ERIE regional center in 1969-1970 to install and disseminate *Man: A Course of Study*. ERIE coordinated and monitored the network in an effort to collect data on the installation strategy—especially the year-long support system composed of the campus teams and the ERIE program director and consultants. Each of the five campus teams filed reports on each of the twenty-three pre-service and in-service classes conducted throughout the year. The teams also filed final reports on their efforts. These reports emphasized the problems they had encountered and pointed up new roles and behaviors that would have to be considered in future training of teachers.

Participating teachers completed reports on each individual MACOS lesson. They used report forms designed to solicit information on the time spent on each lesson, the adequacy of materials and activities for both pupils and teachers, the use of supplementary materials, and the way teachers individualized the lessons. Teachers' anecdotes and comments were also sought. A compilation of the reports from teachers was made in a document called *Teacher Experiences with* Man: A Course of Study *in ERIE Research Network*. That document contains many statements by teachers about the roles and behaviors required in teaching MACOS and about their ability to cope with these new situations.

Another key aspect of the year-long coordinating and monitoring program was the series of on-site visits made by the program director and a group of consultants. This support staff made and recorded over seventy visits to the five campus sites during the year. The data collected from observation and by feedback from campus team leaders indicated new areas for further training and for reinforcement of prior training. They also turned up some anticipated concerns which never materialized. Through this intensive follow-up procedure, a clear pattern of role and behavior needs and concerns emerged.

Roles and Behaviors: Questions and Problems

One of the first roles/behaviors on which interest focused was grouping procedures and techniques. Teachers strongly indicated the need for assistance in group work, especially using small groups, in teaching MACOS. While many reported that most of their students preferred to work in small groups rather than the whole class, others said that their students were experiencing difficulty with small-group discussion. Most teachers reported student enthusiasm and improved discussion skills, or said that students were becoming accustomed to group work and realizing its importance. However, both the campus teams and the program staff reported many requests from teachers for information on grouping procedures and techniques.

Since one of the emphases of MACOS is on the work of leading scholars, the curriculum content is on the cutting edge of knowledge. Thus many questions and issues are raised for which the present state of knowledge has no "answer." In addition, the curriculum stresses the methods and procedures of social science investigation–not the acquisition of some fact or the "right answer." Teachers encountered problems with open-ended questions and discussion. The major difficulty lay in conveying to students that there may not be a "right" answer and that some questions are unanswerable. One teacher explained, "I had a difficult time carrying on or leading a discussion. Some students are still looking for 'right answers,' hesitant in offering judgments and opinions." One campus team reported, "The teachers still look to us as the definitive source for answers to their questions and problems." Another stated, "A few teachers feel uneasy with open-ended questions; that is, they want specific teacher information on what is human about human beings." This role-behavior ideal is best stated by a group of teachers who expressed this view: "The teacher has to refrain from lecturing and giving answers and must guide his students in discovering answers to questions and in posing new questions. The teacher works with the process of learning and not necessarily the content."

The Teacher as Skilled Questioner

Guiding students to engage in inquiry, to probe through questions, places the teacher in a supportive position, not the traditional stance of authority. The class should not revolve about the teacher; he must guide, not direct. The teacher faces the difficult decision: at what point does guidance become direction? The issue is further compounded by the previous experience of students and teachers. This is illustrated by one teacher's comment: "Being non-directive in a class of pupils accustomed to teacher direction is the only difficult part so far." Another teacher remarked, "My student teacher taught MACOS a week–and commented on the difficulty of not talking too much." This role/behavior places teachers in the awkward position of hesitating to express their own ideas. The ability to guide is, as one campus team advises, easier to talk about than to achieve.

The role of the teacher in social science instruction places a very high premium on the teacher's skill with questioning techniques. Open-ended questions also require considerable ability in classroom management behaviors, so that students become involved with ideas and pose their own questions for further study. The effort to promote meaningful discussion, purposeful group work, and involvement with real, not contrived, problems requires the ability to formulate questions and to maintain questioning—not to strive for closure. This critical need was communicated by teachers in such statements as "I am still answering my own questions" and "I don't let the children ask questions." The need for more attention to this area is found in the final reports from all the campus teams.

Breaking with the Old Ways

The "traps of the past" consistently appear in the comments of all the participants. The roles/behaviors required in process education create all sorts of problems. For instance, one campus team recounted, "There is still a rigidity on the part of a few teachers . . . . They feel that every child must do every activity and that time schedules should be adhered to faithfully." Teachers themselves agreed, exemplified by one who said, "I'm still too concerned with covering material."

In a parallel view, there is a great fear of gaps in the social studies curriculum. Many teachers "yearn" for Latin-American or United States history. They express concern about its displacement and anticipate problems of articulation with junior high or middle school. The role/behavior involved in the MACOS curriculum also means that "the teacher learns with her students and together they establish goals which are important." This situation, called "messing around" by David Hawkins,* means that the teacher must be able to take a certain amount of "chaos" in the classroom. Thus, necessary ingredients in any process-education classroom include a patience with children who are learning to learn, a flexible attitude toward learning styles and modes, and a willingness to take some risks in new content areas.

A Breakthrough into the Unfamiliar

One specific activity that created instructional problems in both in-service classes and elementary classrooms was role-playing. Placing themselves in different and unfamiliar roles had mixed effects on the participants and brought forth varied reactions. For example, "The role-playing, after devising questions in groups (on film reactions), was rather effectively squelched by Miss __________'s pleasantly refusing by actions, not words, to role-play a child! The role play became more a discussion of questions and ideas." A campus team found in role-playing activity that "all members participated and showed interest; however, they did not accept the procedure." One teacher who had a particular interest in the device reported that it was an unusually effective classroom instructional tool. She related: "My role consisted in presenting the opportunities for the dramatic play, to remain non-evaluative but supportive, and to be aware of underlying meanings to bring up in a discussion with players and audience." Clearly, the diversity of results indicates the need for some designed input on this subject in order to make the most effective use of this pupil-active projective technique in the classroom.

Implementing a new curriculum, especially one that is expressly designed with new or different expectations of how both students and teachers should behave, evokes some serious insecurity problems. If, as with MACOS, the curriculum also involved unfamiliar content areas, this feeling of insecurity is further intensified. One team described the results this way: "In terms of participant involvement and willingness to enter into discussions, the sessions have been going very well. However, in informal discussion with the teachers, I feel that some of their real problems do not come out during the in-service meetings. One of these seems to be a real sense of insecurity in working with a new program. Hence, instead of following the lead of the children, they follow the teacher's guide." So workshop designers must build in a number of experiences designed to reduce these concerns. It is even more important to role-model new behaviors effectively—not merely talk about them—so that the roles/behaviors seem less threatening.

When the roles/behaviors under discussion are functioning even in a limited way, teachers consistently express surprise and amazement at the quantity and quality of creative expression displayed by their pupils. These experiences have encouraged both teachers and pupils to risk even further explorations. Thus the system can have a self-perpetuating fission effect; but certainly the path toward this goal is tortuous and at times not clearly marked.

---

*David Hawkins, "Messing About in Science," *Science and Children*, Vol. II, No. 5 (Feb., 1965).

WORKSHOP DESIGN

The workshop design was based upon a consideration of the role/behaviors required for effective installation of the MACOS curriculum via the ERIE network plan. The ERIE plan requires that

> A college methods professor and a classroom teacher will function as a team to: (1) design and conduct pre-service classes; (2) design and conduct MACOS lessons for children; (3) design and conduct in-service sessions for other teachers; (4) interact with or be consultants for area administrators, college professors, community groups where MACOS is being implemented; (5) disseminate information about the curriculum to others.

Being an effective team member requires a knowledge and appreciation of the complexity of communication and demands skill practice in building an adequate communication system The workshop design focused on communication skills by incorporating sessions devoted to theory input and practice in paraphrasing, perception checking, description of feelings, giving and receiving feedback, and nonverbal communication.

Effective team membership also involves building feelings of confidence and trust in each other, mutually diagnosing each other's strengths and weaknesses, in order to provide a basis for building shared leadership patterns. To lay a firm foundation for these attitudes and sensitivities, the classroom teacher and college professor were paired throughout the four-week workshop.

The ability to work effectively with diverse groups–in-service classes, pre-service classes, community groups, administrators–demands understanding of social interaction theory and leadership styles. Social interaction theory was explored in the workshop through consideration of (1) how expectations are formed and their effect on perception, (2) how group norms are established and how they function, (3) how a task-oriented group evolves a social organization (see Modules VI [NASA exercise] and VIII [tower-building]), (4) the role assignments or structures evolved by a group to perform a specific function, (5) the effect of competition on task performance, and (6) group process observation (with specific assignments of observer roles). Time was allowed for individual reflection and group discussion of the patterns of social organization and interaction emerging in the workshop.

To design and conduct MACOS lessons for varying groups–pre-service, classroom, in-service–a knowledge of the MACOS curriculum and understanding of MACOS pupil-teacher roles/behaviors is necessary. Sessions devoted to theory and to practical application focused on the behaviors essential to a teacher's effective functioning as a (1) diagnostician, (2) rolemodeler, (3) observer, (4) evaluator, (5) inventor, (6) solicitor of feedback, and (7) sharer of classroom practice. This was also the focus of workshop committees (such as documentation, feedback).

Opportunity to practice these multiple roles/behaviors was provided by a classroom teaching experience. In the case of the Syracuse-area work, it lasted two weeks. Participants were grouped into quartets: two teams of two. One team was to plan and carry out a MACOS lesson while the other quartet members served as observers. Time was provided daily for quartet feedback and community sharing of classroom experiences.

Anticipating participants' needs, five topics were selected and resource areas established: (1) role-playing, (2) conducting a value inquiry, (3) grouping, (4) questioning, and (5) evaluating. The resource areas were available to participants during their afternoon planning time. By serving as consultants in these resource areas, staff members role-modeled the concept of teacher as guide to learning, rather than the teacher as dispenser of information.

Two basic assumptions of the workshop design are that (1) role-modeling of behaviors by workshop leaders is essential for participants' learning and (2) active involvement of workshop participants in practicing role behaviors is also essential.

USER'S GUIDE

The PROCESS EDUCATION FOR TEACHERS package gives the user the basic design for a workshop essentially the same as the one described in the preceding pages.

The reader is advised to read this introductory booklet and the separate research paper before exploring the contents of the thirteen modules. These components provide necessary background: the educational philosophy underlying the project plus documentation, in print, of an actual workshop.

Also essential in preparing for the workshop is familiarity with *Man: A Course of Study* (MACOS) materials. Copies of printed materials will be needed for all participants. All MACOS books, booklets, records, and films may be obtained from Curriculum Development Associates, Washington, D. C.

Other supplementary materials and reading are suggested in several of the modules. See the section in each entitled "To Prepare for This Module."

Each module represents a single session of the workshop. Sessions are of varying length.* Module booklets are organized to help workshop leaders prepare for each module and to act as guides or "prompt books" during the sessions. Each module has the following form:

(1) Contents, giving a step-by-step listing of the sections of the module, to give workshop leaders a summary at a glance
(2) Rationale and Objectives, setting forth the goals and methods of the module
(3) A list of background reading, preparations leaders must make, and materials needed in the module
(4) The steps of the module, each on a separate double page, indicating the approximate time to be allowed, procedures to be followed, instructions to be given, materials to be used, and the specific objectives of the individual step
(5) Feedback questions (where appropriate to elicit participants' comments)

Also included in the modules are reprints of the handouts to be distributed among participants. All of these will be found, in form suitable for reproduction by office copying machine, in the special Handouts section of this package.

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*Module XIII, "Teaching Experience," covers the entire teaching experience, plus some preliminary activity. All of the other modules are designed for a morning, afternoon, or evening session.

THE SEQUENCE OF THE MODULES

I. Using Life Ropes to Initiate Group Interaction
II. Expectations
III. Norms
IV. Problem-Solving Sequence
V. Nonverbal Communication
VI. Social Organization
VII. Structure and Function
VIII. Natural Selection and Adaptation
IX. Force-Field Analysis
X. Cross-Cultural Perspective through Value Inquiry
XI. Round-Robin Problem-Solving
XII. Simulation
XIII. Teaching Experience

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PROCESS EDUCATION FOR TEACHERS

RESEARCH PAPER

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INTRODUCTION

The basic assumption of this paper is that certain pupil behaviors are *end goals* of education. The end goal of process education is the establishment of those pupil behaviors most likely to produce continuing personal growth and effectiveness. Achievement of these behaviors, in turn, is contingent upon the appropriate interaction of four factors: curriculum, teacher, pupil, and learning environment.

The first element, *curriculum*, both influences interaction between teacher and child and affects the child's attitudes toward what he learns. It must be relevant to the child's own interests and needs if he is to feel committed to his learning tasks.

Giving support to the entire instructional program, including the curriculum, must be a healthy *learning environment*, characterized by wholesome interpersonal relationships, a climate of security and trust, and an integrated body of values and norms. The concept of the learning environment extends to all factors inside and outside the classroom that somehow impinge on the educational process.

The effective utilization of curriculum and learning environment hinges on the personality and skills of the *teacher*. The teacher's values, attitudes and beliefs limit the way he shapes the learning environment.

This "shaping," in turn, must relate to the *pupil*, including his needs and his characteristics as a person. It must be congruent with his development at each age-stage, and must facilitate his achievement of the end goals of education.

Any teacher-education program must be designed to produce the sort of teacher who can facilitate interaction of all these factors, as they blend to form the instructional program designed to achieve desired end goals. The teacher education program described in this paper is designed mainly to produce active involvement of all participants in defining their goals; a recognition of peer influence in the learning process; skill in linking the cognitive, affective, and behavioral aspects of the participants' experience; and a respect for the problem-solving, inquiry approach.

In the following pages the authors first define the end goals of education, then indicate how the four elements in the learning process contribute to the achievement of these objectives. Finally, the paper specifies the sort of professional-development program which can facilitate the development of teachers capable of blending the elements described here into an effective instructional program.

PUPIL BEHAVIOR: END GOALS

The end goal of process education is the establishment of those pupil behaviors most likely to facilitate continuing personal growth and effectiveness. The most essential of such behaviors, along with the rationale for their establishment, may be described as follows:

1. Because of rapid proliferation of knowledge, children must learn how to learn. That is, they must learn how to recognize, define, and cope with learning problems, and how to evaluate their effectiveness in progression toward their goals. They must feel adequate to the task themselves, as well as understand how to work with others (Fox & Lippitt, 1968).
2. Children must also accommodate themselves to a constantly changing environment. To this end, they must remain open to new impressions, willing to take risks, and eager to seek those answers that permit continuous adaptation to new situations (Rogers, 1967b).
3. If children are to adapt continuously to change, their most significant educational goal becomes the mastery of the learning process. Learning to learn, in turn, involves recognition of the following basic principles of effective learning.
   (a) Children have a natural potential for learning, and an eagerness to learn if appropriately challenged.
   (b) Children will feel challenged only when they perceive how learning tasks relate to their own needs.
   (c) Children should participate actively in the learning process. That is, they should establish their own goals, assess their own learning resources, formulate a course of action, and, through seeing the consequences of such action, learn how to evaluate their progress.
   (d) Learning is most effective, pervasive, and lasting when goals are so vital that the child feels deeply committed to his task, both intellectually and emotionally.
   (e) If the child is to be creative he should be primarily concerned with self-reward and self-evaluation and only secondarily with evaluation and reward by others (Rogers, 1967b).
4. Only when children understand the significance of what they learn will they value it or be able to apply it in appropriate ways. That is, mere acquisition is pointless without

commitment to the importance and worthwhileness of information, fact, and knowledge (Frymier, 1969).

5. If a child is to improve his skills in learning how to learn he must make satisfactory progress in:
    - (a) developing his own learning style;
    - (b) becoming independent in the utilization of subject-matter skills; and
    - (c) organizing independent, autonomous learning activities, free of rigidly imposed curricular demands (Newman, in press).

FACTORS THAT CONTRIBUTE TO ACHIEVING END GOALS

Those elements involved in achieving the end goals described above are the curriculum, the teacher, the learning environment, and the pupil as person. First to be considered is curriculum, which comprises all the subject matter and learning experiences that contribute to the pupil's arriving at his end goals.

Curriculum

In various significant ways the curriculum influences the learning process–for example, through modifying the interaction between teacher and child. If the curriculum is distant from the needs and interests of the student, its perceived irrelevance may alienate him from the learning process (Fox & Lippitt, 1968). He may turn away from classroom interactions toward those experiences which offer him greater personal meaning and more social satisfaction.

A curriculum capable of influencing learning behavior is one which touches upon those experiences and concepts the student has come to value. Such a curriculum fits the two criteria established by Fox and Lippitt (1968). That is, it is relevant to the student's immediate life needs, and its content significantly increases the learner's core of basic knowledge. If these conditions are not met, the student may well avoid, and thus thwart, most attempts at instruction.

Certain considerations (Fox & Lippitt, 1968) will help in structuring and/or selecting a course of study which meets both criteria of relevance. First, it is important for the student to "learn how to learn" if the behavior patterns associated with growth and change are to become a part of his life style. There are a number of basic skills associated with the development of such a learning capacity. These include group skills, goal-setting abilities, learning how to identify and gain access to resources, and the ability to distinguish among descriptions, inferences, and personal value judgments. Data-gathering, problem-solving, and experimental testing skills are also important. Most vital, however, is the ability to apply such skills to actual life situations. This last consideration is the key to life-long learning.

Crucial to the development of life-long learning is the inclusion within the curriculum of inquiry opportunities for the student. That is, the course of study should be so constructed that students are frequently confronted with actual problem situations and challenged to apply specific skills to their solution. Actual practice in applying the inquiry procedures brings the learning process out of the realm of sometimes irrelevant theory into the field of action and change.

Entry into this field makes it necessary to consider more than a student's cognitive functioning in the structuring and/or selection of a curriculum. That is, the curriculum should also include a consideration of the student's personal orientation toward himself and others. It should involve analysis of value issues, thereby encouraging the student to distinguish value positions, descriptions, or inferences and to discover where his own values lie. Thus, he comes to form his own rational value system, after openly confronting the relationship between value and action in the world around him. In learning about values he will also learn about himself. In short, an avenue to improvement will be opened because he will be more aware of himself and better able to judge himself objectively.

Another avenue to self-improvement requires that the student learn how others may contribute to his personal development and how most effectively to utilize them as resources. Teachers, parents, older peers, and classmates can all add to his learning ability, if provision is made for him to interact appropriately with them.

Although the curriculum itself is only one factor in determining the quality of education, it is a very important element. Its characteristics will influence heavily the kinds of interactions and behaviors exhibited by all participants in the learning process. A high-quality curriculum encourages and supports the most successful sort of teacher-student interaction.

The Learning Environment

Another significant factor in the achievement of the end goals of education is the learning environment. Effective teaching can proceed only in a broadly conceived learning environment, a principle too often ignored. Teaching is a process of human interaction, most often occurring in a group setting. Indeed, since the tasks of academic learning and human relations learning are interdependent processes, the ability to diagnose interpersonal processes in the classroom situation is essential for achieving optimal learning conditions. Yet, to date, educators have too often focused on narrow cognitive objectives, failing to recognize that the attainment of such objectives hinges on the creation of a satisfactory climate for learning, a climate contingent on certain conditions (Fox & Lippitt, 1968):

1. The first element is a satisfactory teacher-pupil relationship, supported by certain teacher attitudes and by the child's recognition, consciously or unconsciously, that the teacher has such attitudes (Thompson, 1969).
    (a) First, the teacher must convey a certain genuineness in dealing with the child, without false front or facade.

   (b) He must be capable of empathy, both sensitive to the student's world and capable of conveying his understanding.

   (c) He must have a positive regard for the child, conveying a sense of caring, without, at the same time, dominating or possessing.

   (d) His concern must be consistent; that is, the child can rely on its being there all the time.

2. If a learning climate is to be healthy, the child must feel secure among peers who accept and respect him. He must also maintain a positive identification with knowledgeable, effective teachers (Fox & Lippitt, 1968).

3. Within such a climate of trust and support the child is capable of taking risks without fear of being ridiculed, undercut, or left without support.

4. Meantime, the teacher must continuously seek to develop the sort of group norms that encourage learning. That is, he must somehow involve the students themselves in maintaining appropriate learning conditions. To this end, the teacher must accept the reality of the peer-group structure and capitalize on its potential (Lippitt, 1970). For example, he often works through group leaders to encourage children's wholesome acceptance of each other regardless of individual differences in age, ability, or personality.

5. In the healthy classroom the teacher must at once facilitate and remove important obstacles to each child's efforts in the learning process. For example, he will keep the channels of communication open, ever ready to help the child identify and cope with the obstacles he encounters. Insofar as possible, he will adapt the learning situation to each child's own special needs and capacities. At the same time, he will encourage the child to assume an active, independent role in the learning process. More specifically the child must become

   > an active selector among the medley of opportunities, and he must become an intelligent defender of his personal integrity and selfhood against the many demands which to him are meaningless, or which demand dependence, or which are inappropriate to his own level of readiness and maturity. He must learn to be an intelligent defender against all the encroachments on his time and energy [Lippitt, 1970, p. 4].

6. A healthy educational climate is also characterized by an appropriate and integrated body of values and norms. According to Miles, (1970), those values most crucial for education are:

   (a) *inquiry norms,* which encourage a "let's-find-out" approach instead of attitudes of dependency;

   (b) *collaborativeness,* which suggests a balanced power distribution between pupils and teachers;

   (c) *authenticity,* a sort of "metanorm" that regulates other norms, and represents real, as opposed to false or superficial, feelings and perceptions;

   (d) *creativity,* a zest for trail-breaking and novel solutions; and

   (e) *individuality,* or respect for individual differences.

In addition, in the classroom, as in practically any group situation, four standards can be identified (Wallis, 1969). The first standard is that of *adequacy,* which suggests that the individual student must find some way to express his own brand of competence in the school environment. He needs to feel that his efforts somehow serve the needs of the group, and that he is accepted as a contributing member of the class.

An equally important standard is that of *worthiness.* Not only does the student need to feel competent, but he needs to feel that his competencies are both needed and appreciated by the group. If he gains no feedback, or reflection, of his values in the classroom he has no way to assess or to justify his feelings of worth. Learning then loses its significance and offers little in the way of personal satisfaction.

The sense of *gratification* is a third standard which should prevail within any group. That is, the student should have many opportunities to do things which are especially gratifying to himself, or are enjoyable in their own right. He should not simply be confined to activities which are externally imposed. Fulfillment is a personal feeling, and should be treated as such.

The final standard is that of *security.* The group structure should present an environment that is non-threatening to the individual. Only in such an environment can he feel free to take risks and expose himself freely to others' thinking, or otherwise experience constant change and growth.

While teachers' personal attitudes importantly influence the quality of the learning environment, other factors are also significant. The total learning situation is much broader than that encompassed by a single classroom. An individual pupil's behavior is influenced by numerous social forces, including parents, older siblings, and groups in the community or society at large. The home environment can either support or discourage a child's classroom interactions. His peer-group relations can work either for or against his attitudes toward learning. Policies and beliefs of those who design and administer the schools are also influential.

> The physical ecology, grouping practices, schedules, facilities and available resource materials will provide the opportunity structure within which the teacher and the students will be able to create an adequate or inadequate learning process [Lippitt & Fox, unpublished manuscript, p. 1].

Thus, the creation of a supportive environment in these more cosmic terms becomes the special responsibility of that segment of our population actively charged with improving the quality of education.

The Teacher As Person

Of course, the effective utilization of both curriculum and learning environment depend on the skill and personality of the teacher. Indeed, individual pupils' reactions are affected by the personal image that the teacher casts on the educational process. Moreover, the quality of the teacher's influence as a professional is inevitably a function of his total characteristics as a person, especially his value orientation (Osborne, 1970). For one thing, the learning process depends for its effectiveness on the teacher's special way of perceiving the world.

The teacher's own world which contains the values, beliefs, and the personal meanings that color and shape his perceptions, acts as a selective screen between him and his environment. The person chooses what he will or will not perceive, and to a great extent, it is his value structure that determines that choice. Values add meaning to perceptions, and the more meaningful a perception, the greater is its effect upon behavior. Therefore, the teacher needs to understand how his values affect his perceptions, and how his perceptions, in turn, control his behavior. Moreover, after he comes to appreciate this concept, he needs to be willing to examine his attitudes and points of view. As a result, he will become a more effective facilitator of learning, and a more active participant in the process of change. In other words, "when the facilitator is a real person, being what he is, entering into a relationship with the learner without presenting a front or a facade, he is much more likely to be effective [Rogers, 1967, p. 4]."

Until the teacher can look honestly at himself he cannot appreciate the relationship between his day-to-day attitudes toward life and his immediate behavior in the classroom.

No matter how much he tries to follow a curriculum or to use certain teaching methods, his own perceptions of a given situation will influence his behavior and help to shape the learning environment. As Combs pointed out, "What we believe is important determines our every behavior and shows in spite of ourselves [Combs, 1967, p. 88]." In other words, it seems "that a teacher's awareness of himself as a person, and his ability to understand the forces which work upon his relationships, are as important as his mastery of subject matter and his familiarity with the laws of child development [Delany, 1968, p. 22]."

The teacher's self-awareness and growth as a professional and as a person will be facilitated if he is accorded the same sort of freedoms that we recognize as being important for the child. In such an atmosphere, the teacher can more readily accept himself, and behave more constructively toward both himself and others. In Carl Rogers' (1964) words:

> It has been a striking fact of my experience that in therapy, where individuals are valued, where there is greater freedom to feel and to be, certain value directions seem to emerge. These are not chaotic directions but instead have a surprising commonality . . . As a species there may be certain elements of experience which tend to make for inner development and which would be chosen by all individuals if they were genuinely free to choose [p. 25].

If Carl Rogers is correct in his assumptions about psychotherapy, the same assumptions should hold for learning. That is, if the environment and the interpersonal interactions give support to individual growth, learning and change will take place. Moreover, the teacher who has accepted himself will more easily come to value those behavior patterns which encourage the student's continuing development as a fully functioning person.

In order to determine for himself how well he is performing his task, both as professional and as person, the teacher should ask himself these questions (Purkey, 1970):

(a) Am I projecting an image that tells the student that I am here to build rather than to destroy him as a person? (Spaulding, 1963, reported that there is a significant relationship between a student's positive self-concept as reported, and the degree to which teachers are calm, accepting, supportive, and facilitative, and a negative relationship between a student's self-concept and teachers who are threatening, grim, and sarcastic.)

(b) Do I let the student know that I am aware of and interested in him as a unique person? (Moustakas, 1966, maintains that every child wants to be known as a unique person, and that by holding the student in esteem, the teacher is establishing an environmental climate that facilitates growth.)

(c) Do I convey my expectations and confidence that the student can accomplish work, can learn, and is competent? (Teacher's expectations have a significant influence on the student's performance.)

(d) Do I provide well-defined standards of values, demands for competence, and guidance toward solutions to problems? (Coopersmith, 1967, has provided evidence that self-reliance is fostered by an environment which is well structured and reasonably demanding, rather than unlimitedly permissive.)

(e) By my behavior, do I serve as a model of authenticity for the student? (Both Jourard, 1969, and Rogers, 1965, suggest that a most important factor in the helping relationship is the helper serving as a model of genuineness, without "front.")

(f) Do I take every opportunity to establish a high degree of private or semi-private communication with my students? (Spaulding, 1963, found a high relationship between the pupil's self-concept and the teacher's behavior when it involved personal and private talk with students.) [pp. 49-50]

Certainly, the teacher who appraises himself in terms of these questions will more likely develop the sort of values required for effective instruction and effective teacher-pupil interaction. As Combs (1962) aptly stated:

> Fully functioning people are people with strong values, beliefs and convictions. So are fully functioning teachers. Children learn their values from the important people in their experiences. To help them grow toward greater self-actualization in the next generation, we need to look at the values we hold in this one. As teachers struggle toward self-realization, they contribute to progress for all of us. [p. 212]

The Pupil As Person

The final and most significant factor contributing to the instructional process is the nature of the pupil himself, both as a person and as a learner. In order for learning to proceed in an effective manner, instructional goals and procedures must reflect what each child is like and how he develops. To this end, it is significant that the teacher keep in mind the following assumptions about human development:

> That each period of life is important both for its own sake and for its impact on subsequent periods

That each individual is a distinct personality at the same time that he is a social being

That he follows a sequential, somewhat predictable pattern of growth, which nevertheless is distinctively his own

That he develops as a whole, each aspect of development interacting with the rest and dependent upon the dynamic organization of the total personality pattern

That understanding the individual depends on appreciating the way he experiences himself and perceives his environment

That heredity furnishes the basic materials of human personality and sets certain limits, but that the realization of each individual's potentialities depends on the nature, sequence, and timing of events in life experience

That normality is represented by a range rather than a point, and that it implies a standard of effective, relatively happy living rather than conformity to a pattern

That the plasticity of human behavior during the periods of infancy and childhood affords a tremendous opportunity to parents and educators but at the same time constitutes a weighty responsibility. Every child is entitled to society's best efforts to help him become all he is capable of being. [Rogers, 1969, Preface]

TEACHER EDUCATION PROGRAM

Current Status Of In-service Education

The development of professionals who can effectively engineer an instructional program requires an appropriate teacher-education program. Many current attempts at educational reform through such programs fail to take into account the ways in which new knowledge should be presented so that it is received and perceived as relevant. Little or no consideration is given to the type of interaction with new knowledge that would support its exploration, incorporation, or adaptation.

That this is the status of current in-service education efforts is corroborated by the findings of Lippitt and Fox stated in their paper "The Development and Maintenance of Effective Classroom Learning." These authors indicate that:

1. Typically, participation in in-service education is a response to direct or indirect coercion (invitations to volunteer) with minimal opportunity to explore the potential benefits.
2. Participants have frequently perceived in-service education activities as irrelevant to their needs and have used this perceived irrelevance as a rationalization for not participating.
3. The content of many in-service programs is pre-selected and pre-organized with little or no knowledge of participants' readiness, level of sophistication, expectation or needs, and little or no opportunity for the participants to engage in problem-solving behavior.
4. Those who do participate are frequently disillusioned by the perceived impracticality of the help offered.
5. Most in-service programs do not provide continuing support. As a result, participants who commit themselves to a change effort are frustrated by lack of support at the time of risk—that is, when change efforts are first implemented.
6. The transfer of learning from in-service education activities to actual problems confronting participants is minimal because of exclusive concentration on cognitive aspects of the in-service education activities and a lack of emphasis on role-performance skills and their application.

7. Participation in professional development and/or personal growth activities is frequently not supported by group norms or procedures.
8. In-service education programs stress the necessity of adopting an idea or model rather than emphasizing the need to adapt any educational innovation to a given situation.

Securing Commitment

Professional development must continue throughout an individual's career if he is to keep pace with changing conditions and new knowledge. An individual's commitment to participation in professional-development activities is influenced by his perception of his need for learning and the perceived relevance of the learning opportunities provided by the professional development program.

Lippitt and Fox (unpublished manuscript) state that a major way of securing commitment to continuing professional development and personal growth is by involving teachers in the identification and articulation of their own training needs. "Changing behavior usually requires an 'unfreezing' process within which an individual (or group) has a chance to examine questions of relevance, value, risk, potential support, and priority, and to develop commitment to change [Lippitt & Fox, unpublished manuscript, p. 13]."

Most educational innovations represent potential confrontations with participants' attitudes and values. Therefore, "whenever possible, teachers should have an opportunity to taste before commitment, to see or experience a sample of what the inservice learning experiences would be like before being asked for a larger commitment [Lippitt & Fox, unpublished manuscript, p. 3]."

To provide an opportunity for participants to (1) identify and articulate their own training needs and (2) sample in-service learning experiences to provide a basis for deciding whether they want to participate, a single-session micro-lab can be designed. Lippitt and Fox (unpublished manuscript), have designed an "images of potentiality micro-lab," based on the conclusion that when participants project a desired state of affairs into the future, they are better able to crystallize and sharpen the focus of their goals (Lippitt & Havelock, 1968). The participants in this lab engage in a brief personal fantasy period in which they describe the evidence of outstanding professional competence (actions and events) which they would be most pleased to observe in themselves a year hence. Trios then share their goal fantasies, helping each other to clarify and refine them. Each participant then does a force-field analysis of the factors inhibiting or supporting movement toward the desired state or goal. This sharing of personal goals and problems can result in the identification of groups of participants with the same interests.

Total System Involvement

What others expect, or seem to expect, is also important. Perceived peer expectations function to limit or enhance the change potential of individuals. For this reason, an individual's professional development must be viewed in the context of group process and total staff development. Change efforts are enhanced if peer norms support experimentation, innovation, taking initiative in suggesting improvements, and sharing, and if in-service education activities are carried on in a setting in which the people who work together learn together. Learning goals which involve the clarification of role relationships, establishment of supportive group norms, skill in effective group operation, and development of a climate of openness, trust, and mutual support require involvement of the total school staff.

To foster both individual and total staff development, the professional-development program must simultaneously provide opportunities for individuals to (1) engage independently in personal growth activities and (2) participate in role-clarification and team-development activities. Such a professional-development program would be supporting a wide variety of activities simultaneously, but each activity would emerge as a response to either individual or group need.

"Inside-Outside" Leadership

To provide sufficient leadership for the variety of professional development activities, staff members may need to assume responsibility for conducting training activities. Therefore, a systematic program is needed to develop the conceptual resources and process skills which staff members need to train peers. Such a program would require the effective collaboration of an "inside-outside" (consultant) team (Lippitt & Fox, unpublished manuscript) in the joint planning and execution of such training activities as those involving problem solving, seeking and utilizing resources, developing alternatives for action, and evaluating the results of change efforts.

A critical factor in the development of a collaborative "inside-outside" team is the delineation of the appropriate role for the insider (trusted peer)–that is, making clear how the insider, while sanctioning innovation by collaborating with outsiders (consultants), can maintain his membership and status as a trusted peer.

The importance of the role of the trusted peer is documented by the research of Rubin (1969) which indicates that the perceived relevance and feasibility of a particular change program are increased when communicated by trusted peers in a climate of non-threatening support.

Other critical functions performed by peer leaders include systematic data collection and analysis of variables affecting the professional growth climate—for example, openness of communication, perceived support for change, and congruence of goal priorities among various groups within the system. Such data collection and analysis provide information useful in planning and/or adjusting future change efforts.

Peer leadership also insures that continuing support will be available at the time of greatest risk—that is, during the initial try-out and will therefore contribute to the maintenance and stabilization of change efforts.

Cognitive-Affective-Action Linkages

Maintenance and stabilization (internalization) of change efforts or new behavior patterns are likely to occur if the design of professional development programs activates and links the cognitive, affective, and action aspects of participants' behavior. To activate such linkage Lippitt and Fox (unpublished manuscript) recommend that, "the total sequence of inservice learning activities should be organized as problem-solving efforts where active inquiry initiative is the responsibility of the learner [p. 17]."

Lippitt and Havelock (1968) hypothesize that "anticipatory rehearsal is the most crucial variable in linking intention to action [p. 39]." Anticipatory rehearsal involves the exploration of alternative courses of action, the selection and experimental try-out of a selected alternative, and evaluation of the try-out effort.

Alternative courses of action can be explored through a variety of simulated environments. A simulated environment is a "selected representation of a real situation or a reproduction of a social or physical environment [Rogers, V., 1970, p. 337]." Simulated environments must be "adequately structured, low-risk, and provide opportunities for feedback [Davis & Gregory, 1970, p. 203]." Simulations can provide experience in a wide range of activities—those involving affect as well as cognition, process as well as content. Simulations also allow participants to experience what is referred to as "constructive failure"—that is, "the opportunity to make mistakes without hurting anyone and to learn from these mistakes [Twelker, 1967, p. 201]."

Micro-teaching is an effective simulation for anticipatory try-outs. The "structure of the micro-teaching clinic (experience) will depend on the focus and purposes of the experimentation [Allen, 1967, p. 6]." Possible foci might be: student-teacher interaction, use of instructional material, analysis of group process, and specific teaching skills (for example, questioning techniques).

Another effective simulation is the human relations laboratory focusing on

> the principles of group dynamics and communication and having explicit behavioral goals postulated as ultimately having a positive relationship to the learner in the educational experience. As such it is concerned with the interrelationships between the teacher and the pupils. As such it is concerned with the communication process [Osborne, 1970, p. 2]."

Consideration should be given to the assumptions underlying the application of human-relations training to the classroom situation. Several assumptions have been identified by Roark (1970):

1. First of all, education is aimed at human effectiveness.
2. Personal meaning is more important in learning than objective or abstract meaning.
3. Total organismic reaction is more effective in learning than either an intellectual or affective reaction in isolation.
4. Human interaction is essential for complete human development.
5. The major task of teaching is to provide a psychologically safe environment with suitable resources and not to provide information [p. 8].

Osborne (1970) suggests that human relations training might include the following specific techniques: (1) study of group process, (2) training in communication, (3) seminars in group theory and research, (4) feedback and listening exercises, (5) modeling of behaviors, (6) "share-ins" where the participants have an opportunity to discuss individual concerns and receive assistance from the group, practicing skills in giving and receiving help. The ultimate goal of human relations training techniques is the improvement of the interactive process.

Program Evaluation

The effective functioning of any professional-development or in-service education program requires continuous revision and continuous evaluation. Such evaluation should reflect the progress being made toward the desired end goals. In addition, the evaluation program should embrace these principles cited by Fox and Lippitt (1968):

1. Evaluation procedures should be constructive not destructive. Evaluation results, whether positive or negative, should be presented in ways that help the participants and the program to grow.

2. Evaluation is not primarily a judgment by one person about another's performance but a collaborative process of goal-setting, planning for and gathering appropriate data, and making judgments based on the data [p. 26].
3. Evaluation becomes an integral part of the learning process as feedback is provided promptly, continuously, and in a form that enables participants to relate the evidence to objectives which have been agreed upon.
4. Process goals as well as conceptual learnings are to be evaluated.
5. More formal data gathered through program evaluation and measurement procedures can stimulate thoughtful reaction and the development of program implications.

SUMMARY

The professional development program described in this paper reflects the ways in which new knowledge should be presented so that it is received and perceived as relevant. Crucial elements of the professional development program include:

(1) active involvement of participants in identifying and articulating their own training needs;

(2) opportunities to "taste before commitment" by experiencing what the in-service learning activities would be like;

(3) realization that peer expectations function to limit or enhance an individual's change potential; therefore, professional development programs must consider (a) the school as a total system and (b) norms and procedures supportive of change efforts;

(4) recognition of the necessity of peer leadership to sanction, initiate, maintain, and support change efforts;

(5) provision for activities (such as micro-teaching and human relations laboratory) designed to activate and link the cognitive, affective, and action aspects of participants' behavior;

(6) recognition that all professional-development activities should demand problem-solving effort and inquiry initiative on the part of participants;

(7) evaluation as an integral part of the professional-development program.

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HANDOUT 1

PARAPHRASING
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

The Problem

Tell somebody your phone number and he will usually repeat it to make sure he heard it correctly. However, if you make a complicated statement, most people will express agreement or disagreement without trying to insure that they are responding to what you intended. Most people seem to assume that what they understand from a statement is what the other intended.

How do you check to make sure that you understand another person's ideas, information or suggestions as he intended them? How do you know that his remark means the same to you as it does to him?

Of course, you can get the other person to clarify his remark by asking, "What do you mean?" or, "Tell me more," or by saying, "I don't understand." However, after he has elaborated, you still face the same question. "Am I understanding his idea as he intended it to be understood?" Your feeling of certainty is no evidence that you do in fact understand.

The Skill

If you state in your own way what his remark conveys to

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HANDOUT 1

PARAPHRASING
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

you, the other can begin to determine whether his message is coming through as he intended. Then, if he thinks you misunderstand, he can speak directly to the specific misunderstanding you have revealed. The term "paraphrase" can be used for any means of showing the other person what his idea or suggestion means to you.

Paraphrasing, then, is any way of revealing your understanding of the other person's comment in order to test your understanding.

An additional benefit of paraphrasing is that it lets the other know that you are interested in him. It is evidence that you do want to understand what he means.

If you can satisfy the other that you really do understand his point, he will probably be more willing to attempt to understand your views.

Paraphrasing, thus, is crucial in attempting to bridge the interpersonal gap. (1) It increases the accuracy of communication, and thus the degree of mutual or shared understanding. (2) The act of paraphrasing itself conveys feeling...your interest in the other, your concern to see how he views things.

HANDOUT 1

PARAPHRASING
A BASIC COMMUNICATION SKILL FOR
IMPROVING INTERPERSONAL RELATIONSHIPS

Learning to Paraphrase

People sometimes think of paraphrasing as merely putting the other person's ideas in another way. They try to say the same thing with different words. Such word-swapping may result merely in the illusion of mutual understanding. See the following example:

Sarah: Jim should never have become a teacher.
Fred: You mean teaching isn't the right job for him?
Sarah: Exactly! Teaching is not the right job for Jim.

Instead of trying to reword Sarah's statement, Fred might have asked himself, "What does Sarah's statement mean to me?" In that case the interchange might have sounded like this:

Sarah: Jim should never have become a teacher.
Fred: You mean he is too harsh on the children... maybe even cruel?
Sarah: Oh, no. I meant that he has such expensive tastes that he can't ever earn enough as a teacher.
Fred: Oh, I see. You think he should have gone into a field that would have insured him a higher standard of living?
Sarah: Exactly! Teaching is not the right job for Jim.

Effective paraphrasing is not a trick or a verbal gimmick. It comes from an attitude, a desire to know what the other means. And to satisfy this desire you reveal the meaning his comment had for you so that the other can check whether it matches the meaning he intended to convey.

If the other's statement was general, it may convey something *specific* to you.

Larry: I think this is a very poor textbook.
You: Poor? You mean it has too many inaccuracies?
Larry: No, the text is accurate, but the book comes apart too easily.

Possibly the other's comment suggests an *example* to you.

Laura: This text has too many omissions; we shouldn't adopt it.
You: Do you mean, for example, that it contains nothing about the Negro's role in the development of America?
Laura: Yes, that's one example. It also lacks any discussion of the development of the arts in America.

If the speaker's comment was very specific, it may convey a *more general* idea to you.

Ralph: Do you have 25 pencils I can borrow for my class?
You: Do you just want something for them to write with? I have about 15 ball-point pens and 10 or 11 pencils.
Ralph: Great. Anything which writes will do.

Sometimes the other's idea will suggest its *inverse* or *opposite* to you.

HANDOUT 1

PARAPHRASING
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

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Stanley: I think the Teachers' Union acts so irresponsible because the administration has ignored them so long.

You: Do you mean that the T. U. would be less militant now if the administration had consulted with them in the past?

Stanley: Certainly. I think the T. U. is being forced to more and more desperate measures.

To develop your skill in understanding others, try different ways of conveying your interest in understanding what they mean and revealing what the other's statements mean to you. Find out what kinds of response are helpful ways of paraphrasing for you.

The next time someone is angry with you or is criticizing you, try to paraphrase until you can demonstrate that you understand what he is trying to convey as he intends it. What effect does this have on your feelings and on his?

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HANDOUT 2

FILM INTRODUCTION

Part I

This film is about Don, a teacher, encountering three individuals. In a few minutes you will receive briefings about the teacher in the film. After viewing the film you will receive a list of adjectives from which you will check those adjectives that most apply to the teacher.

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HANDOUT 3

BRIEFING ON FILM X

Don is a conscientious and well-liked teacher. He feels a little insecure because of his color and tries very hard to please. In ten years of teaching Don has only been late four times. Today you will be viewing his fifth late arrival.

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HANDOUT 4

BRIEFING ON FILM Y

Don is a new teacher who is having a very hard time adjusting to his new position. He very often comes to school late and most of his colleagues feel that he has a constant chip on his shoulder. You will be viewing Don arriving late at school once again.

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HANDOUT 5

ADJECTIVE CHECKLIST

Check the adjectives which you feel apply to Don.

___1. Angry

___2. Kind

___3. Hostile

___4. Loving

___5. Impatient

___6. Hard-working

___7. Judgmental

___8. Concerned

___9. Insecure

___10. Caring

___11. Resentful

___12. Pleasant

___13. Lazy

___14. Confident

Add any others not listed here which you think apply.

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HANDOUT 6

EXPECTATIONS OF OTHERS

Research has demonstrated the expectations or mental set of an individual influences his perceptions. Rosenthal and Jacobson[1] performed an exciting piece of research with startling results. These researchers deliberately misinformed teachers in a school about the abilities of their pupils. In each of the school's 18 classrooms an average of 20 percent of the children, randomly selected, were reported to the classroom teacher as showing, as a result of an IQ test, "unusual" potential for intellectual gains. Eight months later these "unusual" children showed significantly greater gains in IQ than the remaining pupils in the class. A profound implication of this study, according to the authors, is that expectations can be self-fulfilling.

If we expect an individual to behave in a certain way it is more than likely we see him behave that way. Murray[2] had subjects describe the picture of a man under two conditions--before and after they had played a game of "murder." The subjects tended to see much more maliciousness in the man's features after the game than before the game. Mental set can be an important factor in determining selective perception.

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[1] Rosenthal and Jacobson, 1967.

[2] H. A. Murray, "The Effects of Fear Upon Estimates of the Maliciousness of Other Personalities," Journal of Social Psychology, 4 (1933), 310-329.

HANDOUT 6

EXPECTATIONS OF OTHERS

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Often, teachers who put "halos" on their favorite students or "dunce caps" on the trouble makers will interpret the student's behavior within their own expectations. This distortion of reality may have harmful effects on the good student as well as the poor student. It especially will affect the relationship between teacher and student. Obviously these implications are applicable to other relationships than teacher-student.

You have just participated in such an "expectation experiment." You were given two different briefings about "Don" (see briefings X and Y). You can see the two listings of adjectives for "Don" on the chart. You all watched the same film. Do you see differences in the two lists of perceptions apparently based on the briefings? Discuss the implications with your groups.

HANDOUT 7

EXPECTATIONS OF SELF

Evidence indicates self-expectations influence performance. If you expect to do poorly your behavior will more than likely bear this out, thereby confirming your self-expectations. This is known as the "self-fulfilling prophecy." Examples of this are constantly being played out in our everyday experiences. For instance, it's the salesman who says, "You don't want to buy my product, do you?" that generally makes few sales. An example most teachers are familiar with is the student who expects to fail and, of course, does. Or the student who says, "I can't do that." and doesn't try at all.

We can probably think of many occasions in our own lives when we've entered situations with confidence and have achieved success. Conversely, many challenges which we've failed first and met later have contained only one element of difference--our own attitude about ourselves.

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HANDOUT 8

WHAT IS A NORM?

A norm is a thing that develops in groups. A norm exists when most people in a group arrive at doing a particular thing in a particular way, because they have come to expect each other to behave that way. Here are some examples. When formally introduced, most men in the United States are usually expected to include a handshake in their greeting while women may or may not. In some family groups, most members of the family usually get their own breakfast on Sunday morning. In some faculty groups, most members usually address each other by their last names when in the faculty lounge. In other faculty groups, first names are the norm when in the faculty lounge. Some faculties don't have a lounge.

Sometimes a norm is referred to as a custom or style. It may relate to specific rules that have been set forth. It may be simply thought of as the "in" thing to do. It may be a thing that most people in a particular group do without ever having thought clearly about it. A norm can develop so that everybody does a thing the same way. "All the women in this group wear dark hats on Sunday." Or the norm can be, "All the women in this group do whatever they please about wearing hats on Sunday." Or, "Most of the women wear dark hats on Sunday, but a few can be expected not to wear hats at all." Thus, a norm doesn't necessarily mean that everyone does a thing exactly in the same

HANDOUT 8

WHAT IS A NORM

Page 2

way. The idea is not one of conformity. Indeed, a norm can develop to support variety. A norm may say, "It's good to have differences."

Norms are not built from scratch. Norms develop from the values, expectations and learned behaviors that the individuals in a group bring with them. A norm in a particular group is usually arrived at implicitly. That is, people arrive at their way of doing the thing in question without giving much thought or discussion to it. Most people don't sit on the floor when they find themselves in a room that appears to be arranged formally. Most people don't remain standing when they are at the beach. But, most people don't ask others about such things. They simply do, or don't do, them in certain ways because this is what they have come to expect. They are following norms.

Norms exert a powerful influence on what most of us communicate under certain circumstances to whom, when and in what ways. Such influences are seldom looked at. It's even more rare that we attempt to change norms to better suit our needs and desires. Normally we simply live with them. Yet norms have far reaching impacts. To illustrate, what norms have developed in your small group which is meeting at the moment about who sits where? If you have fallen into a clear pattern of certain people sitting

HANDOUT 8

WHAT IS A NORM

Page 3

next to certain others, how has this affected who talks to whom about what? If the pattern has been one of shifting seating arrangements, what effect has this had on informal exchanges--on who asks who for clarification, help or ideas.

In your group discuss what norms have developed about seating, if any, and how this may be affecting communications. If no norms about seating seem clear, discuss why they may not have evolved (since they tend to form rapidly in groups) and how your communications are being affected. Continue to discuss other kinds of norms you can see that your group has formed concerning communications such as:

> When you have been asked to discuss things as a small group how does the discussion usually start out?
>
> How are boredom or frustration generally expressed, if at all?
>
> If the norm is that boredom or frustration are almost never expressed in the group, why is this so?
>
> Most groups develop norms about things they "do" and "don't" talk about. What topics are "do's" and "don'ts" in your group?
>
> Some groups tend to have an intensive climate where people are frequently on the "edge of their chairs." Others are

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HANDOUT 8

WHAT IS A NORM

Page 4

low key. Still others have a pattern of sharp ups and downs of intensity. What is the norm in your group and why?

What other norms have developed in your group?

(Charles C. Jung)

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HANDOUT 9

REACTION SHEET

During the discussion which your group just held, there were probably many times that you felt positive or negative reactions to ideas or things that were happening. You might have shared some of your reactions. You might, for example, have said things like, "I agree," "Good," or "I see it differently." On other occasions you might have reacted by smiling, nodding, shuffling your feet or yawning. You probably had many reactions that you did not share at all. It would not necessarily be helpful, or even possible, for each person to share every single reaction during a group discussion. Some of us undoubtedly share more often than others.

1. How often have you shared your reactions?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

2. How often did others generally share their reactions in the group?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

HANDOUT 9

REACTION SHEET

Page 2

3. You may wish you had shared your reactions more or l frequently. How often would you have liked to share your reactions?

1	2	3	4	5	6	7	8	9
Not at All		A Few Times		Half the Time		Often		Every Time

4. How often do you think that others want reactions to be shared in the group?

Not at All	A Few Times	Half the Time	Often	Every Time

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 10

NORMS WITHIN THE CLASSROOM

A research study found that in the average elementary school classroom most children are less active in collaborating with the teacher to learn than they privately would like to be. Most children think, wrongly, that the others don't want to be more active in collaborating with the teacher. Most children actually collaborate with the teacher at the lowest level which they believe most of the other children desire!

What do you think are the major norms operating in your classroom and your faculty group at home? Which of these would be the most important to check out? Discuss this in your small group.

(Charles C. Jung)

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 11

NONVERBAL BEHAVIOR

The Problem

Much is communicated by the words we use and the emphasis, or inflection, we give them. We also communicate in nonverbal ways such as frowning, crossing our arms, looking at the floor as we speak, blushing, looking at the clock or beckoning with a hand. Some nonverbal behaviors convey an idea such as putting a finger to your lips in a gesture of silence. Some indicate feelings such as smiling or pounding your fist on a desk.

Nonverbal behavior is often more spontaneous than the words we use. It can therefore present a clearer picture of the meaning which the speaker intends to communicate than his words alone. There is a potential problem however. Unless we use the skill of perception check, we may sometimes be interpreting the other person's nonverbal cues incorrectly. We may think a person has closed his eyes because he is bored, when actually he closed them so as to concentrate better or listen to what is being said. It's important to be sure we know the correct meaning of the nonverbal behavior when it influences us in the communication.

Another possible problem can arise when you communicate things nonverbally that you are unaware of. You probably use many spontaneous nonverbal mannerisms that you are unaware of. These are part of your personal style of interpersonal

HANDOUT 11

communications. Some of these mannerisms may have obvious meaning to others. Some mannerisms you use may only be correctly understood by those who know you well. They may cause frequent confusion or misunderstanding for those who do not know you well. It can be important to become aware of the nonverbal mannerisms which are part of your style. You can then use them in a way that matches what you are saying. You can then also help others to learn what they mean as part of your personal, individual style of communicating. For example, you might find it is helpful to tell others, "People sometimes think I'm doubting them when they see me raise my eyebrows. That's generally not the case for me. I have a habit of raising my eyebrows when I hear something that especially interests me."

The Skills

Three skills can help improve that part of interpersonal communication which is nonverbal. The first is the skill of "perception check." If you feel a person's nonverbal behavior is influencing your reaction to the person you are communicating with, you may be wise to check whether you have a correct understanding of that behavior.

HANDOUT 11

NONVERBAL BEHAVIOR

The second skill is to recognize your own nonverbal behaviors. This is a difficult thing to learn. Few people have experience with observing themselves as they communicate. One way to do it is to use films or television tapes. An opportunity to use such expensive equipment to "see ourselves as others see us" can be revealing and extremely helpful. Another way to get such "feedback" is to ask others to watch you and describe your behaviors to you. You can learn to watch for clues that you may be communicating meanings nonverbally that are causing problems. If you suspect this is happening, it can sometimes help to suggest that the other person share his perception of how you are reacting. Getting him to use "perception check" may lead to a needed clarification as well as provide "feedback" to you about nonverbal behavior you were unaware of.

The third skill involves giving and receiving "feedback," i.e. sharing impressions and reactions of the other persons behavior. Two especially important ones for clarifying meanings of nonverbal behavior are "paraphrasing" to be sure you understand what the other is seeing of you and being specific in asking him to observe your nonverbal mannerisms. Examples of being specific would be to say,

> "Watch and tell me after the meeting whether there are times you think I appeared to be bored."

HANDOUT 11

NONVERBAL BEHAVIOR

Page 4

or

"Have I been doing anything as you spoke that indicated times I agreed or disagreed with your ideas?"

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 12

DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

The Problem

To communicate your own feelings accurately or to understand those of others is difficult.

First, expressions of emotion take many different forms. Feelings can express themselves in bodily changes, in action, and in words.

Second, any specific expression of feeling may come from very different feelings. A blush, for example, may indicate the person is feeling pleased, but it may also indicate that he feels annoyed, or embarrassed or uneasy.

Likewise, a specific feeling does not always get expressed in the same way. For example, a child's feelings of affection for his teacher may lead him to blush when she stands near his desk, to touch her as he passes her, to watch her as she walks around the room, to tell her "You're nice," to bring his pet turtle to show her, etc.; different forms of expression indicate the child's feeling of affection.

Communication of feelings, thus, is often inaccurate or even misleading. What looks like an expression of anger, for example, often turns out to result from hurt feelings or from fear.

HANDOUT 12

DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

A further obstacle to the accurate communications of feelings is that your perception of what another is feeling is based on so many different kinds of information. When somebody speaks, you notice more than just the words he says. You note his gestures, voice tone, posture, facial expression, etc. In addition, you are aware of the immediate present situation--the context in which the interaction is occuring. You are aware of whether somebody is watching, for example. Therefore, you make assumptions about how the situation influences what the other is feeling. Beyond all of this you also have expectations based on your past experiences with the other individual.

You make inferences from all of this information--words, nonverbal cues, the situational context, your expectations of the other. These inferences are influenced by your own current emotional state. What you perceive the other to be feeling, then, often depends more upon what you are feeling than upon the other person's actions or words. For example, if you are feeling guilty about something, you may perceive others as angry with you. If you are feeling depressed and discouraged about yourself, others may seem to be expressing disapproval of you.

Communicating your own and understanding the feelings of

HANDOUT 12

DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

others is an extremely difficult task. And, yet, if you wish others to respond to you as a person, you must help them understand how you feel. Likewise, if you are concerned about the other as a person and about your relationship with him, you must try to understand his emotional reaction.

The Skill

Although we usually try to describe our ideas clearly and accurately, we often do not try to describe our feelings clearly. Feelings get expressed in many different ways, but we do not usually attempt to identify the feeling itself.

One way to describe a feeling is to identify or name it. "I feel angry." "I feel embarrassed." I feel comfortable with you." However, we do not have enough names or labels to encompass the broad range of human emotions, and so we invent other ways to describe our feelings, such as the use of similes. "I feel like a tiny frog in a huge pond." A girl, whose friendly overture had just been rebuffed, said, "I feel like I have just had an arm amputated."

A third way to describe a feeling is to report what kind of action the feeling urges you to do. "I feel like hugging and

HANDOUT 12

DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR
IMPROVING INTERPERSONAL RELATIONSHIPS

hugging you." "I'd like to slap you." "I wish I could walk off and leave you."

In addition, many figures of speech serve as descriptions of feeling. " I just swallowed a bushel of spring sunshine."

Describing Your Own Feelings

When describing your feelings you try to make clear what feelings you are experiencing by identifying them. The statement must (1) refer to "I," "me," or "my," and (2) specify some kind of feeling by name, simile, action urge or other figure of speech.

The following examples show the relation between two kinds of expressions of feeling, (1) those that describe what the speaker is feeling, and (2) those that do not. Notice that expressions of feeling which describe the speaker's emotional state are more precise, less capable of misinterpretation, and, thus, convey more accurately what feelings are affecting the speaker.

Expressing feeling by describing your emotional state	Expressing feeling without describing your emotional state
" I feel embarassed."	Blushing and say nothing.
" I feel pleased."	
"I feel annoyed."	

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DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR
INPROVING INTERPERSONAL RELATIONSHIPS

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"I feel angry!" "I'm worried about this." "I feel hurt by what you said."	Suddenly becoming silent in the midst of a conversation.
"I enjoy her sense of humor." "I respect her abilities and competence." "I love her but I feel I shouldn't say so."	"She's a wonderful person."
"I hurt too much to hear any more." "I feel angry at myself." "I'm angry with you."	"Shut up!!!"

Because emotional states express themselves simultaneously in words, in actions and in physiological changes, a person may convey contradictory messages about what he is feeling. For example, his actions (a smile or laugh) may contradict his words (that he is angry). The clearest emotional communication occurs when the speaker's description of what he is feeling matches and, thus, amplifies what is being conveyed by his actions and other nonverbal expressions of feeling.

The aim in describing your own feelings is to start a dialogue that will improve your relationship with the other. After all, others need to know how you feel if they are to take your feelings into account. Negative feelings are indicator signals that something may be going wrong in a relationship with another person.

HANDOUT 12

To ignore negative feelings is like ignoring a warning light that indicates an electrical circuit is overloaded. Negative feelings are a signal that the two of you need to check for misunderstanding and faulty communication.

After discussing how each sees the situation or your relationship, you may discover that your feelings resulted from false perceptions of the situation and of his motives. In this case, your feelings would probably change. However, the other may discover that his actions are arousing feelings in you that he wasn't aware of--feelings that others beside you might experience in response to his behavior--and he may change.

In short, describing your feelings should not be an effort to coerce the other into changing so that you won't feel as you do. Rather you report your inner state as just one more piece of information that is necessary if the two of you are to understand and improve your relationship.

Perception Check

You describe what you perceive to be the other's inner state in order to check whether you understand what he feels. That is, you test to see whether you have decoded his expressions of

HANDOUT 12

DESCRIPTION OF FEELINGS
A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

feeling accurately. You transform his expressions of feeling into a tentative description of his feeling. A good perception check conveys this message, "I want to understand your feelings--is this (making a description of his feelings) the way you feel?"

Examples:

"I get the impression you are angry with me. Are you?"
(NOT: "Why are you so angry with me?" This is mind reading, not perception checking.)

"Am I right that you feel disappointed that nobody commented on your suggestion?"

"I'm not sure whether your expression means that my comment hurt your feelings, irritated you or confused you."

Note that a perception check describes the other's feelings, and does not express disapproval or approval. It merely conveys, "This is how I understand your feelings. Am I accurate?"

(John L. Wallen)

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 13

HOW DO YOU EXPRESS YOUR FEELINGS?

Do these five exercises individually. When everyone has finished, discuss the different possibilities that the group members have written down. If you have any questions refer back to the paper on Description of Feelings.

Below are some feelings you may have experienced. For each of these you are to report two different ways that you express such feelings.

The first answer should be some way that would express but not describe your feelings. The second answer should report how you might express such feelings by actions without using words.

1. When you feel bored with what is going on in a group, how does your feeling usually express itself?

   In words?

   Without words?

2. When you feel very annoyed with another staff member, but reluctant to say so openly, how does your feeling usually express itself?

   In words?

   Without words?

3. Another person says or does something to you that deeply hurts your feelings, how does your feeling usually express itself?

   In words?

   Without words?

HANDOUT 13

HOW DO YOU EXPRESS YOUR FEELINGS?

Page 2

4. Another person asks you to do something that you are afraid you cannot do very well. You also do not wish him to know that you feel inadequate. How do your feelings express themselves?

   In words?

   Without words?

5. When you feel fondness and affection for another person and at the same time are not sure that the other feels the same toward you, how does your feeling usually express itself?

   In words?

   Without words?

(John Wallen)

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 14

OBSERVATION GUIDE: PERCEPTION CHECKING
OBSERVATION OF NON-VERBAL COMMUNICATION

Whenever your pair partner seems to be communicating one thing verbally and something else non-verbally, make appropriate notes. Make a note of any non-verbal behavior which appears to you to convey an idea or a feeling.

Non-verbal things my partner does and wants me to watch for

Non-verbal things I have noticed which I don't think my pair partner is aware of or has not told me about

Behavior	What I saw	What I heard him say	What I saw him do	My guess is that what he really thinks is What he really feels is

---

Northwest Regional Educational Laboratory (Portland, Ore.), Interpersonal Communications package (published by XICOM Inc., Tuxedo, N. Y.).

HANDOUT 15

SOCIAL ORGANIZATION-SIMULATION

In quartet, using environment boards, show these situations:

A baboon troop:

- crossing a plain
- drinking at a water hole
- resting
- facing a predator
- going into sleeping trees

Place cutouts, drawings, or figures according to the way baboons would be placed in the above situations. Encourage three-dimensional projects.

Use booklets in baboon series and Field Notes as sources of information in addition to the film.

Sharing: Each group of participants is to share their environment boards with the rest of the groups. Each presenting group is to provide a minimum of information. Other participant groups are to note relationships and infer the illustrated situation of the baboon troop.

HANDOUT 16

NASA EXERCISE INDIVIDUAL WORKSHEET

INSTRUCTIONS: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Owing to mechanical difficulties, however, your ship was forced to land at a spot some 200 miles from the rendezvous point. During landing, much of the equipment aboard was damaged, and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank-order them in terms of their importance to your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on, through number 15, the least important. You have 15 minutes to complete this phase of the exercise.

___ Box of matches

___ Food concentrate

___ 50 feet of nylon rope

___ parachute silk

___ Portable heating unit

___ Two .45 calibre pistols

___ One case dehydrated Pet milk

___ Two 100-lb. tanks of oxygen

___ Stellar map (of moon's constellation)

___ Life raft

___ Magnetic compass

___ 5 gallons of water

___ Signal flares

___ First aid kit containing injection needles

___ Solar-powered FM receiver-transmitter

J. William Pfeiffer and John E. Jones, A Handbook of Structured Experience for Human Relations Training, Vol. I (Iowa City, Iowa: University Associates Press), pp. 54-57.

HANDOUT 17

NASA EXERCISE GROUP WORKSHEET

INSTRUCTIONS: This is an exercise in group decision-making. Your group is to employ the method of Group Consensus in reaching its decision. This means that the prediction for each of the 15 survival items must be agreed upon by each group member before it becomes a part of the group decision. Consensus is difficult to reach. Therefore, not every ranking will meet with everyone's complete approval. Try, as a group, to make each ranking one with which all group members can at least partially agree. Here are some guides to use in reaching consensus:

1. Avoid arguing for your own individual judgments. Approach the task on the basis of logic.
2. Avoid changing your mind only in order to reach agreement and avoid conflict. Support only solutions with which you are able to agree at least somewhat.
3. Avoid "conflict-reducing" techniques such as majority vote, averaging, or trading in reaching your decision.
4. View differences of opinion as helpful rather than as a hindrance in decision-making.

___ Box of matches

___ Food concentrate

___ 50 feet of nylon rope

___ Parachute silk

___ Portable heating unit

___ Two .45 calibre pistols

HANDOUT 17

NASA EXERCISE GROUP WORKSHEET

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___ One case dehydrated Pet milk

___ Two 100-lb. tanks of oxygen

___ Stellar map (of moon's constellation)

___ Life raft

___ Magnetic compass

___ 5 gallons of water

___ Signal flares

___ First aid kit containing injection needles

___ Solar-powered FM receiver-transmitter

J. William Pfeiffer and John E. Jones, A Handbook of Structured Experience for Human Relations Training, Vol. I (Iowa City, Iowa University Associates Press), pp. 54-57.

HANDOUT 18

NAME ______________________

Rank all members of group including self:

Participants Name	Correct Answer ranking (1=highest)	Participation ranking (1=highest)
________________	____	____
________________	____	____
________________	____	____
________________	____	____
________________	____	____
________________	____	____

HANDOUT 19

NASA EXERCISE ANSWER SHEET

RATIONALE:	CORRECT NUMBER	
No oxygen	15	Box of matches
Can live for some time without food	4	Food concentrate
For travel over rough terrain	6	50 feet of nylon rope
Carrying	8	Parachute silk
Lighted side of moon is hot	13	Portable heating unit
Some use for propulsion	11	Two .45 calibre pistols
Needs H_2O to work	12	One case dehydrated Pet milk
No air on moon	1	Two 100-lb. tanks of oxygen
Needed for navigation	3	Stellar map (of moon's constellation)
Some value for shelter or carrying	9	Life raft
Moon's magnetic field is different from earth's	14	Magnetic Compass
You can't live long without this	2	5 gallons of water
No oxygen	10	Signal flares
First aid kit might be needed but needles are useless	7	First aid kit containing injection needles
Communication	5	Solar-powered FM receiver-transmitter

J. William Pfeiffer and John E. Jones, A Handbook of Structured Experience for Human Relations Training, Vol. I (Iowa City, Iowa: University Associated Press), pp. 54-57.

HANDOUT 20

NASA EXERCISE DIRECTION SHEET FOR SCORING

The group recorder will assume the responsibility for directing the scoring. Individuals will:

1. Score the net difference between their answers and correct answers. For example, if the answer was 9, and the correct answer was 12, the net difference is 3. Three becomes the score for that particular item.
2. Total these scores for an individual score.
3. Next, total all individual scores and divide by the number of participants to arrive at an average individual score.
4. Score the net difference between group worksheet answers and the correct answers.
5. Total these scores for a group score.
6. Compare the average individual score with the group score.

RATINGS:

0-20	Excellent
20-30	Good
30-40	Average
40-50	Fair
over 50	Poor

J. William Pfeiffer and John E. Jones, A Handbook of Structured Experience for Human Relations Training, Vol. I (Iowa City, Iowa: University Associates Press), pp. 54-57.

HANDOUT 21

THE IMPORTANCE OF VARIATION

Varieties of the same species of animal may be found in two quite different environments as a result of geologic changes. Although of the same species, these organisms exhibit different characteristics developed over a considerable time span. Some differences in characteristics have allowed individual members of the species to live and reproduce more successfully in the environment. Those organisms lacking these characteristics have great difficulty in both surviving and reproducing in the same environment. This is commonly called natural selection.

HANDOUT 21

THE IMPORTANCE OF VARIATION

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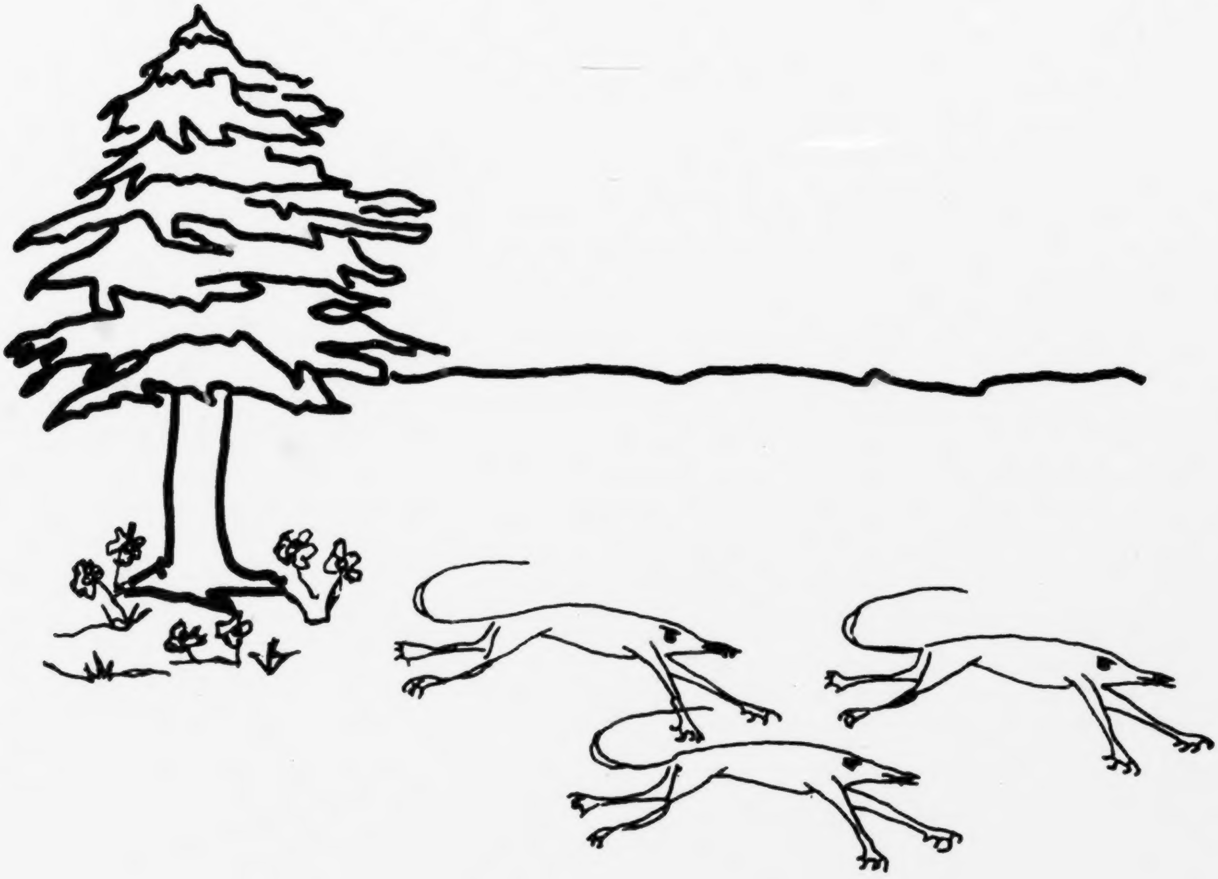
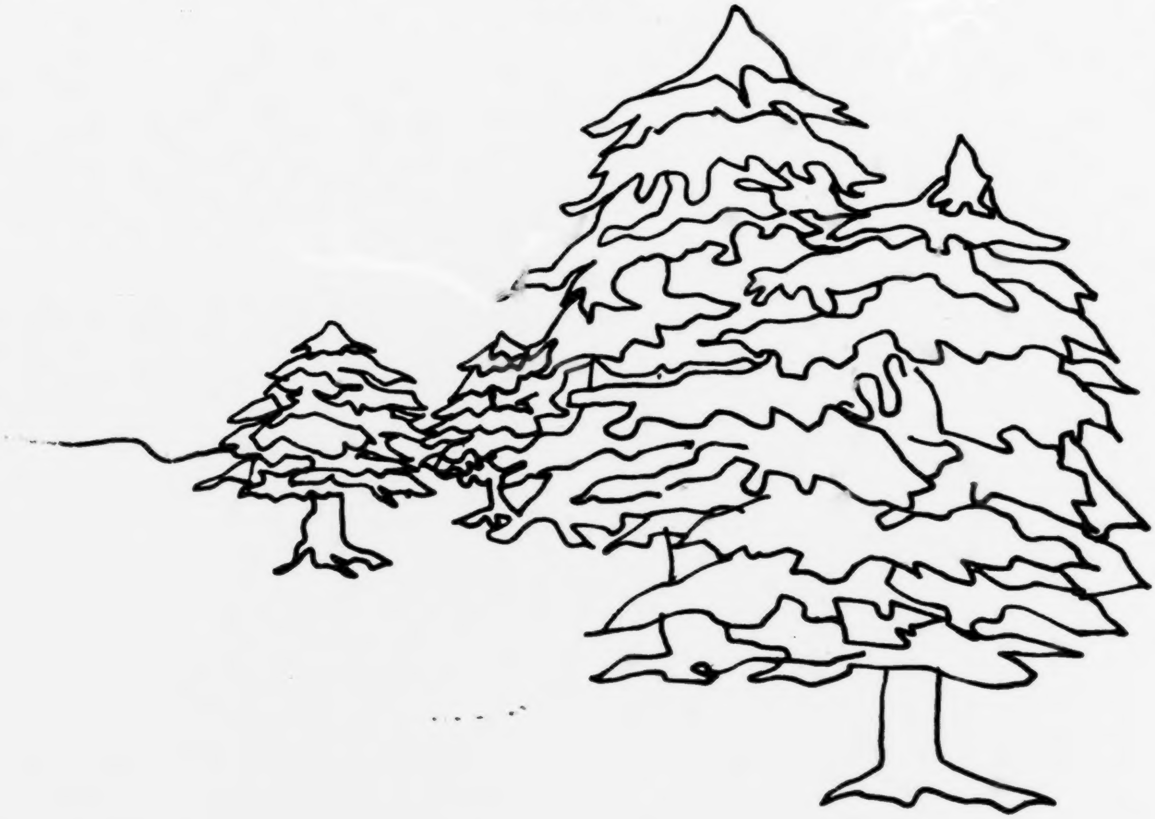


This plains-dwelling animal is a member of the Clurg species. Other members of the species live in the forext. The plains-dwelling Clurgs live in groups of four or five, males and females together. During a day, they roam over the meadow, nibbling on clover and daisy roots. At night they sleep in burrows. They have excellent eyesight and good claws for burrowing. They run quickly.

HANDOUT 21

THE IMPORTANCE OF VARIATION

Page 3



The females have two or three offspring at a time. Soon after they are born, little plains-dwelling Clurgs must be able to run along with the adults or they are left behind.

The forest-dwelling Clurgs are members of the same species but they have some characteristics that are different from the plains-dwelling Clurgs. Make up characteristics of the forest-dwelling Clurgs. Sketch one or more in the picture above.

HANDOUT 21

THE IMPORTANCE OF VARIATION

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Describe how their physical characteristics would make the behaviors of the forest dwelling Clurgs different from the behaviors of the plains dwelling Clurgs.

Suppose there was a sudden flood that lasted several weeks. Could any of the Clurgs survive? If so, what characteristics would they have?

How has natural selection affected the Clurg species?

> Have all of the members been killed and the species become extinct? Or, if some members have survived, what characteristics will they pass on to their offspring? What characteristics have disappearned?

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HANDOUT 22

1. Identify the role or roles played by each person - for example, builders, material handlers, planners.

2. How were these roles determined? Did roles change and, if so, why?

3. Did your role in the group change as a result of a change in the task?

4. Rate on the following scale your group's degree of competition/cooperation.

1	2	3	4	5	6
cooperation					competition

5. Did the fact you all built in the same room, increase or decrease competition?

6. Would you say your behavior reflected more a concern for task or a concern for people?

7. Do you feel you and/or your group utilized communication skills? Which specific skills?

Me	Group

HANDOUT 23

OPTIONAL RATING SHEET

If you desire, check your personal effectiveness by checking others' perception of:

a. 1 2 3 4 5 6

your ability to listen.

b. 1 2 3 4 5 6
tendency to build on ideas of others.

c. 1 2 3 4 5 6
willingness to be influenced.

d. 1 2 3 4 5 6
tendency to take over group.

e. 1 2 3 4 5 6
reactions to opinions opposed to yours.

f. 1 2 3 4 5 6
your reactions to comments about your behavior in a group.

HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

A problem situation exists when there is a difference between the way things are and the way someone wants them to be. Kurt Lewin borrowed a technique from the physical sciences and offered it as a way to understand social science problem situations. It is called the force field diagnostic technique. The idea is that any social/psychological situation is the way it is at any given moment because sets of counter balancing forces are keeping it that way.

For example, let's look at the amount of money I am apt to earn next week. Let's say it is apt to be about $200.00. There are factors, or forces, in my life that might cause me to earn more than that. I have some debts that I'd like to pay off. My wife wants a new dress. I have some skills for making extra money as an entertainer and as a consultant on teacher education. On the other hand, there are forces against my earning more than $200.00 next week. I'll have little time or energy next week beyond the 50 hours demanded by my job and the time I promised to spend with my kids.

In the force field diagnostic technique, you start by writing a problem statement at the top of a page and drawing a line down the middle of the page. The line down the middle represents the way things are now. Draw a dotted line down the right hand side of the page which represents how you would like

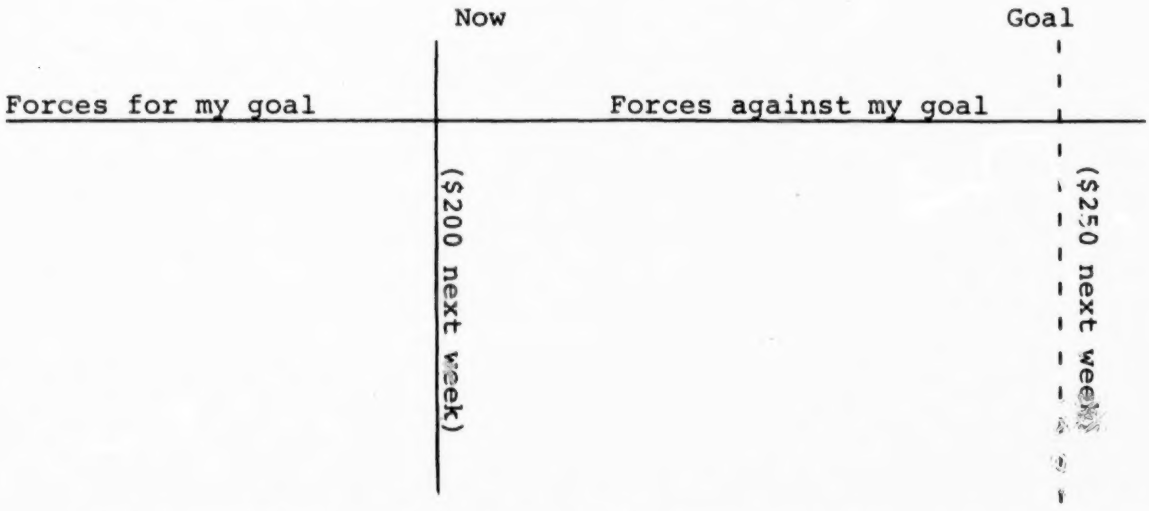
HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

Page 2

things to be. For example, supposing I wanted to earn $250.00 next week instead of my usual $200.00. I would begin to write out my force field diagram as follows.

Problem Statement: I am causing myself a problem in that I want to change my earning goal for next week from $200.00 to #250.00.


Now
Goal
Forces for my goal
Forces against my goal
($200 next week)
($250 next week)

Next I would write down all of the important forces I can think of that could help push me toward achieving my goal. I write these on the left side of the diagram with an arrow from each pointing in the direction of my goal. I write down forces pushing against movement toward my goal on the right side of the center line.

HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

Forces for my goal	Now	Forces against my goal	Goal
I'd like to pay off some debts	($200 next week)	50 hours demanded by my job	($250 next week)
My wife wants a new dress		time promised to my kids	
I have skills for making extra money			

Now you try an example. Suppose you accept a goal of losing five pounds during the next two weeks. Write out a force field below for this goal. Write out a problem statement, the forces for and the forces against. Then go to the next page of this handout.

Problem Statement:

Forces for	Now	Forces against	Goal

HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

Your force field on losing five pounds during the next two weeks should look something like the following illustration.

Problem Statement: You set a goal for me of my losing five pounds during the next two weeks.

Forces for	Now	Forces against	Goal
I tend to be a light eater	(I weigh ? pounds today)	I'm presently about three pounds under weight	(I will weigh ? pounds two weeks from now)
I want to save some money		I don't want to accept this goal	
We are visiting my mother-in-law this weekend and I don't like her cooking		My mother-in-law will be unhappy if I don't eat well while visiting her	

Of course, the forces you wrote down are apt to differ from the ones in this illustration. The important thing is that you understand the technique. Here are some guidelines to help make the force field diagnostic technique a powerful one.

HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

1. Be as specific as possible in the way you write each force. Don't write things like, "poor communication." Write, "Sally and Martha don't tell each other their reasons for using different instructional materials." Forces are stated most helpfully when written in such a way that someone else reading one would know who to go to and what to ask in order to get a fuller understanding of what is involved in that force.

2. Try to state discrete forces rather than global ones. A force can often be broken down into further subparts. For example, a force such as, "I find it hard to lose weight," might break down to three more discrete forces as follows. "I get a headache when I skip a meal." "My wife often serves rich desserts." "Television ads get me thinking about eating in the evening." Sometimes, you can think of ways to break down a force into more discrete subparts by considering the forces for and against changing a force that you are considering!

3. Thinking about categories of forces can help you think of ones you might otherwise overlook. Consider categories of forces in: yourself - "I get a headache when I skip

HANDOUT 24

THE FORCE FIELD DIAGNOSTIC TECHNIQUE

a meal." other individuals - "My wife often serves rich deserts." groups - "We often share materials in our department." or organizations - "The district gives salary credit for this training." society - "Television ads get me thinking about eating."

Northwest Regional Educational Laboratory (Portland, Ore.),
Research Utilizing Problem Solving package.

HANDOUT 25

FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

To use this technique, one must first state a problem in terms of a clear goal. An example will be used to illustrate the technique. Mr. Smith is a youth worker who states his problem as follows:

> As an adult working with a group of youth, I'm concerned about developing interdependence between us. I don't want the youth in our group to do things just because I suggest them. On the other hand, I don't want them to reject ideas just because they come from the adult. I have a goal for the group of becoming more open and active in criticizing what they see as helpful and nonhelpful in my suggestions and of seeking my reactions to theirs.

Mr. Smith now is ready to write out his first force field. He takes a blank sheet of paper and writes the general nature of the problem at the top. He then draws a horizontal line across the top. On the left side of the line he writes the words forces for interdependence. On the right side he writes forces against interdependence. In the right margin of the paper he writes the goal which he has specified for his problem, "open and active criticism of ideas between the group and me." In the left margin of the paper he writes the opposite of his goal, "no criticism of ideas between the group and me."

Now he draws a vertical line down the middle of the page. This line represents the way things are at the moment with regard to openness and activeness of criticism between him and the group. Things are the way they are at the moment because there is a set of forces pushing from the left toward openness

HANDOUT 25

FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

Page 2

and activeness of criticism, and an equal set of forces pushing from the right against openness and activeness. If the forces on the left become stronger while those on the right stay the same or get weaker, the line will move toward the right--toward more openness and activeness. Mr. Smith now must write out what he believes to be the important forces operating in this situation.

Diagram I presents his first effort at writing out the force field.

DIAGRAM I

Force Field No. 1 - Interdependence Between the Group and Me

	forces FOR interdependence	forces AGAINST interdependence	
Opposite of Goal			Goal
	youth want to try their ideas	youth afraid their ideas will look poor to others	
No Criticism of Ideas Between Us	youth want good ideas from adults	youth used to letting adults tell them what to do	Open and Active Criticism of Ideas Between Us
	adults want youth to question and criticize	youth afraid to criticize adult openly	
		adult frequently judgmental in his criticisms	

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FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

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Mr. Smith wasn't very satisfied with his first effort to draw the force field. He suspected there were additional forces other than the ones he had thought of. During his next meeting with the youth, he raised the question of how people felt about discussing each other's ideas. He asked specifically for their reactions to some of the ideas he had recently suggested. He especially asked them to share their reactions. They seemed reserved, however, about giving them. One of them told him privately later, "We just don't talk about that with adults. I would have said some things, but the other kids would have thought I was being an apple polisher."

Mr. Smith believed he had learned two things from the discussion. One was that an additional "force for" was to actively ask the youth for their reactions. Another was that there was some kind of norm among the youth about not talking to adults in a way that would be seen as "apple polishing." This norm appeared to be an important "force against." He thought maybe the peer leadership of the group was an important "force against" which was affecting the way this norm operated in the group.

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FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

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In Diagram II Mr. Smith has added these three forces to the force field.

DIAGRAM II

Force Field No. 2 - Interdependence Between the Group and Me

Opposite of Goal	forces FOR interdependence	forces AGAINST interdependence	Goal
No Criticism of Ideas Between Us	youth want to try their ideas	youth afraid their ideas will look poor to others	Open and Active Criticism of Ideas Between Us
	youth want good ideas from adults	youth used to letting adults tell them what to do	
	adult wants youth to question and criticize	youth afraid to criticize adult openly	
	adult actively asks for youth reactions	adult frequently judgmental in his criticisms	
		youth have norm of not talking with adults	
		peer leaders support norm of not talking with adults	

Mr. Smith now did three additional things with his force field. First, he ranked all of the forces in terms of *how important*

HANDOUT 25

FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

he thought they were in trying to change the situation. He put a number 1 by that force field which he believed would yield the most movement *toward the goal* if it could be changed. He put a 2 by the force that he thought would result in the second greatest amount of movement if changed, and so forth. Secondly, he *rated* each force in terms of *how easy* he thought it would be for him to bring about some change in it. He gave each force a rating of hard, medium or easy. Third, he again *rated each force*, this time in terms of how clear he was about whether it really was a force. Was he just imagining it to be a force, or was it really operating? He labeled each force as clear, partly clear, unclear.

Diagram III presents Mr. Smith's force field at this point.

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FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

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DIAGRAM III

Force Field No. 2 - Interdependence Between the Group and Me

Opposite of Goal	forces FOR interdependence	forces AGAINST interdependence	Goal
	(clear) (3) (easy) youth want to try their ideas	(medium) (10) (unclear) youth afraid their ideas will look poor to others	
No Criticism of Ideas Between Us	(partly clear) (6) (medium) youth want good ideas from adults	(easy) (9) (clear) youth used to letting adults tell them what to do	Open and Active Criticism of Ideas Between Us
	(partly clear) (7) (easy) adults want youth to question and criticize	(medium) (8) (partly clear) youth afraid to criticize adult openly	
	(partly clear) (4) (medium) adult actively asks for youth reactions	(hard) (5) (partly clear) adult frequently judgmental in his criticisms	
		(hard) (1) (partly clear) youth have norm of not talking with adults	
		(medium) (2) (unclear) peer leaders support norm of not talking with adults	

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FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

Now Mr. Smith had a picture of what he thought was going on in his problem situation. The most important thing that stood out to him was that he was not very clear about some of the forces which he guessed to be important. He went back to the youth to get more information about forces that were not clear. He got this information both through discussions and by using questionnaires. The force which he had ranked as most important seemed so complex to him that he wrote out a force field diagram about it!

This helped him identify further forces and questions he needed to discuss with the youth. Mr. Smith also began to consider ways he could alter some of the forces. He put some of these alternatives into action. His efforts to get information from the youth to determine the force fields turned out to be an action plan in itself which proved helpful. Mr. Smith found the group changing in the direction of his goal.

At the end of several weeks, Mr. Smith found it helpful to look back over his efforts. He could note the changes which had occurred in his force field over time. He knew that his current force field diagram was much more accurate than his first attempts had been. It was based on careful data gathering. He had gathered some kinds of data several times so that he could

HANDOUT 25

see evaluatively how some of the forces had changed in response to the action efforts which he and the youth had worked out. Most exciting to Mr. Smith was his discovery that he could share the force field technique with the youth. Now they were working together on diagnosing goal situations, planning action for the group and evaluating the reasons for success and failure.

SUMMARY

A person applying the force field technique in diagnosing a problem and/or deriving the most appropriate solution will have completed the following process steps:

1. Identified a problem/goal
2. Stated a problem applying all criteria
3. Listed forces for and against in proper form
4. Rated forces in numerical scales
5. Ranked forces in numerical scales
6. Gathered data about problem
7. Evaluated data and derived other forces, etc.
8. Derived and stated appropriate solution strategy
9. Evaluated solution effectiveness

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FORCE FIELD TECHNIQUE FOR DIAGNOSING A PROBLEM

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SUMMARY FOR CRITERIA OF RANKING AND RATING

Ranking:

A. Importance is defined as significance. How important or significant is a force in yielding the most movement toward the goals?

Rating:

A. Strength refers to resistance to change. How easy or hard would it be to change that force? Is it hard, medium or easy?

B. Clarity refers to evidence. What evidence is there that it is a force? How clear is it to me that it is a force?

Northwest Regional Educational Laboratory (Portland, Ore.),
Research Utilizing Problem Solving package.

HANDOUT 26

CONSIDERING ACTION IMPLICATIONS OF FORCE FIELD ANALYSIS

Considering Action Alternatives: As diagnostic work progresses, a range of action alternatives should emerge. Each should be considered in relation to knowledge of the forces operating in the problem situation. If one or some combination of the alternatives is tried, what will happen to the forces pushing toward or away from a particular goal? How will the forces operate to influence the success or failure of a trial of a particular action alternative?

Trying Out an Action Plan: At some point, one or a combination of the action alternatives will be attempted. As the attempt is made, information will be needed to assess whether there is movement toward the goals. This includes discovery of the forces which are changing to understand what is accounting for movement, or lack of it. Such assessment provides both an evaluation of progress and a new diagnostic picture. It clarifies the next action steps which need to be taken. It also may identify additional skills which may be needed in order to move ahead.

Diffusion and Adaptation: Information gained from action experience in dealing with a problem should be shared with others who face similar problems. Information to be diffused should include: A clear, specific problem statement; the forces involved

CONSIDERING ACTION IMPLICATIONS OF FORCE FIELD ANALYSIS

in the problem situation; a description of action taken to change the forces; results of action including failures as well as successes; special problems that were encountered; and special skills that were needed to carry out particular actions. These kinds of information make it possible for persons in another setting to adapt elements of what was tried to their own diagnosis of their particular problem situations.

Continuous attention to diagnosis is the cornerstone of the action-research steps of problem solving. Without complete, accurate diagnosis, problems tend to multiply. Fads are accepted which don't really fit the local situations where they are applied. Potentially good solutions are abandoned without realizing the slight changes which are needed to make them work. Decisions are made on the basis of peoples' ability to argue or on the status of positions which they hold rather than on the true facts of the situation. Helpful innovations are rediscovered and die repeatedly without being effectively shared as people don't know what to tell or what to ask.

Northwest Regional Educational Laboratory (Portland, Ore.), Research Utilizing Problem Solving package.

HANDOUT 27

INDIVIDUAL REFLECTION SHEET

a. Identify the values held by the teacher.

b. Identify the pupils' values.

c. Identify your values and rank them (1=highest, 6=lowest) in order of priority.

d. What relationships do you see between the pupils' values and their actions?

e. Based on what you know about the teacher's values, what do you predict her behavior will be?

f. Based on your identified values and priorities, what would you do in this situation?

g. What do you foresee are the possible consequences of the teacher behaviors which you predicted?

h. What do you foresee are the possible consequences of the way you would behave in this situation?

HANDOUT 28

DISTINGUISHING AMONG DESCRIPTIONS, INFERENCES, VALUE JUDGMENTS*

Description:

1. What you observe exactly.
2. Stated exactly as it happened, without elaboration.
3. What really did take place?
4. What exactly was said?
5. Objectivity.

Inferential:

1. "Supposes" and guesses about situations.
2. Exploring behavior beyond actual observation.
3. What were his feelings?
4. What were his intentions?
5. Interview role players to find out their inside feelings.
6. Statement of what is likely or possible.

Value Judgments:

1. Deciding whether behavior is good or bad, right or wrong.
2. Opinions related to whether things are good or bad, right or wrong.
3. Statement about what inside forces cause certain behavior.
4. Statements about values held by individuals.

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*distinguishing criteria determined by workshop participants during a summer 1969 workshop at Franklin School, Syracuse, N. Y.

HANDOUT 29

GUIDELINES FOR HANDLING VALUE INQUIRY

1. Teacher's role is that of

    (a) facilitator (giving each child opportunity to speak-protecting the right of a child to have views different from others).

    (b) clarifier (helping children to express their values and their feelings and ideas).

    (c) summarizer (helping children to organize their proposals).

2. Teacher's role is to

    (a) involve the children.

    (b) encourage interaction.

    (c) help children clarify their ideas.

    (d) trust children to draw their own conclusions as to what is a good or poor solution to the human problem involved.

    (e) remain non-judgmental.

3. Teacher attempts to help each child

    (a) become aware of the values he has learned.

    (b) make progress toward understanding the reasons for his values.

    (c) become aware of how to use his values when confronted with choices.

    (d) understand how choice relates to consequences.

    (e) understand what value alternatives exist for others.

HANDOUT 29

GUIDELINES FOR HANDLING VALUE INQUIRY

Page 2

4. Teaching goal is not to settle upon a solution. It is to give practice in decision-making and to help each child to clarify his own values. Children are helped to grow in their ability to anticipate consequences in their sensitivity to feelings in self and others, in their skill in generating reasonable alternatives.

5. Vital to value inquiry is the right climate: a climate where pupils realize that they are not expected to come up with the "right" answer.

   Value inquiry is not a procedure for indoctrinating the children with the values that you, as a particular adult, want them to accept.

ANDOUT 30

PARTICIPANT A
PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the discussion leader in this phase. Your specific tasks are to:

- --involve each discussant in the effort to explain the passage
- --avoid communicating any of your own evaluation or judgment of the ideas expressed.
- --discourage the discussants' evaluation of each other's ideas.
- --work to get as many different ideas as possible.
- --prevent pursuit or exploration of any one idea.

HANDOUT 30

PARTICIPANT A
PHASE I -- BRAINSTORMING:

These are the guide-questions the observer used to watch the discussion leader:

Did the discussion leader:

1. make an effort to involve each discussant in the hypothesizing process?
2. communicate evaluation or judgment of the ideas expressed--either verbally or non-verbally?
3. discourage participants' expression of judgment and evaluation of each other's ideas?
4. appear to be really listening to comments of the participants? Convey interest in their comments?
5. feel pressed to fill silent periods with his own talk? Was he able to wait for discussant to comment.
6. work to get as many different ideas as possible?
7. prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT A
PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the three ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which--whether proven or disproven--would allow the greatest gain in information.

You are one of the three discussants in this phase. Try to participate as actively as possible in the task of the group.

HANDOUT 30

PARTICIPANT A
PHASE II: HYPOTHESIS SELECTION

These are the guide-questions the observer used in this phase.

Did the discussion leader:

1. press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)
2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other?) If we select this as our "test-idea", are there others on the list that should be eliminated?)
3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)
4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)
5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT A
PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are the observer. Observe the entire group this time, looking for evidence on the following questions:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person, or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT A
PHASE III: EVIDENCE SEARCH

Page 2

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples--what did the discussion leader actually do or say? What did the leader or discussants do that seemed particularly helpful to achieving the goals of this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

HANDOUT 30

PARTICIPANT A
PHASE III: EVIDENCE SEARCH

Page 3

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT A
PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on one hypothesis from among the three you have been working on, and state this in hypothetical form.

2. Agree on the most promising ways of testing this hypothesis: decide on several action steps you might take to determine the validity of your hypothesis.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion: you are also asked to serve as recorder for your group. Record the hypothesis statement your group agrees on. List the action steps the group selects as tests for the hypothesis.

HANDOUT 30

PARTICIPANT A
PHASE IV: HYPOTHESIS TESTING

These are the guidelines the observer used in this phase:

Does the discussion leader:

1. listen to what the discussants are saying?
2. seem pressed to "fill-in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?
3. seem supportive and encouraging to the participants?
4. convey a sense of being personally interested in the group's problem?
5. move the group into a brainstorm-session for one part of this period?

HANDOUT 30

PARTICIPANT A
PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the value patterns and behavior norms of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You have two jobs in this round:

You are to participate as actively as possible in the discussion; you are also asked to serve as timekeeper.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin": take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

HANDOUT 30

PARTICIPANT A
PHASE V: VALUE ANALYSIS

Page 2

These are the guidelines the observer used in this phase:

1. Did the DL keep the group working on the task?
2. Seem to encourage and support the participation of each discussant?
3. Try to increase the interest and involvement of the group in this task? (How?)
4. Appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 30

PARTICIPANT B
PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the discussant in this phase. Try to participate as actively as possible in the task of the group.

LB

HANDOUT 30

PARTICIPANT B
PHASE I: BRAINSTORMING:

Page 2

These are the guide-questions the observer used to watch the discussion leader:

Did the discussion leader:

1. make an effort to involve each discussant in the hypothesizing process?
2. communicate evaluation or judgment of the ideas expressed -- either verbally or nonverbally?
3. discourage participants' expression of judgment and evaluation of each other's ideas?
4. appear to be really listening to comments of the participants? Convey interest in their comments?
5. feel pressed to fill silent periods with his own talk? Was he able to wait for discussant to comment?
6. work to get as many different ideas as possible?
7. prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT B
PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the three ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which -- whether proven or disproven -- would allow the greatest gain in information.

You are the observer in this round. You should direct your attention to the discussion leader. Does he:

1. Press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)
2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other?) If we select this as our "test-idea", are there others on the list that should be eliminated?)
3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)
4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

HANDOUT 30

PARTICIPANT B
PHASE II: HYPOTHESIS SELECTION

5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples -- what did the discussion leader actually do or say? What did the leader or discussants do that seemed particularly helpful to achieving the goals of this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

HANDOUT 30

PARTICIPANT B
PHASE II: HYPOTHESIS SELECTION

These are the guide-questions the observer used in this phase.

Did the discussion leader:

1. press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)
2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other?) If we select this as our "test-idea", are there others on the list that should be eliminated?)
3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)
4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)
5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT B
PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE: After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion;

You are also asked to serve as recorder for your group -- note briefly the supporting evidence cited for each idea.

HANDOUT 30

PARTICIPANT B
PHASE III: EVIDENCE SEARCH

Page 2

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT B
PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on one hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several action steps you might take to determine the validity of your hypothesis.

You have two jobs in this round:

You are to participate as actively as possible in the the discussion: You are also asked to serve as timekeeper.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin": take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

HANDOUT 30

PARTICIPANT B
PHASE IV: HYPOTHESIS TESTING

Page 2

These are the guidelines the observer used in this phase:

Does the Discussion Leader:

1. listen to what discussants are saying?
2. seem pressed to "fill-in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?
3. seem supportive and encouraging to the participants?
4. convey a sense of being personally interested in the group's problem?
5. move the group into a brainstorm-session for one part of this period?

HANDOUT 30

PARTICIPANT B
PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the value patterns and behavior norms of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the discussion leader in this round:

1. You are to keep the group working on the task
2. Encourage and support the participation of each discussant.
3. Try to increase the interest and involvement of the group in this task
4. Listen, use paraphrasing, clarify question, etc. to keep discussion from getting bogged down.
5. Help group develop norm of being free to express value positions which differ from those held by others.

HANDOUT 30

PARTICIPANT B
PHASE V: VALUE ANALYSIS

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 30

PARTICIPANT C
PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You are the observer.

Did the discussion leader

1. Make an effort to involve each discussant in the hypothesizing process?
2. Communicate evaluation or judgment of the ideas expressed -- verbally or nonverbally?
3. Discourage participants' expression of judgment and evaluation of each others' ideas?
4. Appear to be really listening to comments of participants? Convey interest in their comments?
5. Feel pressed to fill in silent periods with his own talk. Was he able to wait for discussant to comment?
6. Work to get as many different ideas as possible?
7. Prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT C
PHASE I: BRAINSTORMING: OBSERVATION GUIDE

These are the guide-questions the observer used to watch the discussion leader:

Did the discussion leader:

1. make an effort to involve each discussant in the hypothesizing process?
2. communicate evaluation or judgment of the ideas expressed -- either verbally or non-verbally?
3. discourage participants' expression of judgment and evaluation of each other's ideas?
4. appear to be really listening to comments of the participants. Convey interest in their comments?
5. feel pressed to fill silent periods with his own talk? Was he able to wait for discussant to comment?
6. work to get as many different ideas as possible?
7. prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT C
PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots," the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the three ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which -- whether proven or disproven -- would allow the greatest gain in information.

You are discussant and recorder

Record the three ideas your group selects

HANDOUT 30

PARTICIPANT C
PHASE II: HYPOTHESIS SELECTION

These are the guide-questions the observer used in this phase.

Did the discussion leader:

1. press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)

2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other?) If we select this as our "test-idea", are there others on this list that should be eliminated?)

3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT C
PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You have two jobs in this round.

1. You are to participate as actively as possible in the discussion.
2. You are also asked to serve as time keeper. The group will have five minutes for the discussion period and five minutes for the feedback period. You should let the group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop

HANDOUT 30

PARTICIPANT C
PHASE III: EVIDENCE SEARCH

Page 2

leader will announce "Begin". Take this as your starting point and watch for the two-minute and one-half minute intervals from that point.

HANDOUT 30

PARTICIPANT C
PHASE III: EVIDENCE SEARCH

Page 3

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule.
2. Did every discussant participate?
3. Did the group seem to give thoughtful attention to the contributions of each person or did they listen more carefully to one person?
4. Did the members ask each other for supporting rationale?
5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT C
PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on one hypothesis from among the three you have been working on, and state this in hypothetical form.
2. Agree on the most promising ways of testing this hypothesis: decide on several action steps you might take to determine the validity of your hypothesis.

You are the discussion leader in this round. Your job is to:

1. Move the group into a brainstorm session for Part I of this period.
2. Listen to what the discussants are saying
    a. Clarify
    b. Paraphrase
    c. Do not push any one idea--in general facilitate the discussion.
3. Try to get the group going without prodding questions--wait for participants' responses; do not fill in periods of silence.
4. Be supportive and encouraging.

HANDOUT 30

PARTICIPANT C
PHASE IV: HYPOTHESIS TESTING

Page 2

These are the guidelines the observer used in this phase:

Does the discussion leader:

1. listen to what discussants are saying?

2. seem pressed to "fill-in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?

3. seem supportive and encouraging to the participants?

4. convey a sense of being personally interested in the group's problem?

5. move the group into a brainstorm-session for one part of this period?

HANDOUT 30

PARTICIPANT C
PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the value patterns and behavior norms of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are a discussant in this phase.
Participate as actively as possible.

HANDOUT 30

PARTICIPANT C
PHASE V: VALUE ANALYSIS

Page 2

These are the guidelines the observer used in the phase:

1. Did the DL keep the group working on the task?
2. Seem to encourage and support the participation of each discussant?
3. Try to increase the interest and involvement of the group in this task? (How?)
4. Appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 30

PARTICIPANT D
PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You have two jobs in this round:

You should try to participate as actively as possible in the discussion.

You are also asked to serve as recorder for your group--making a list of all the ideas the group produces.

HANDOUT 30

PARTICIPANT D
PHASE I: BRAINSTORMING:

These are the guide-questions the observer used to watch the discussion leader:

Did the discussion leader:

1. make an effort to involve each discussant in the hypothesizing process?
2. communicate evaluation or judgment of the ideas expressed--either verbally or non-verb ally?
3. discourage participants' expression of judgment and evaluation of each other's ideas?
4. appear to be really listening to comments of the participants? Convey interest in their comments?
5. feel pressed to fill silent periods with his own talk? Was he able to wait for discussant to comment?
6. work to get as many different ideas as possible?
7. prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT D
PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots", the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the three ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which--whether proven or disproven--would allow the greatest gain in information.

You have two jobs in this round:

You are to participate as actively as possible in the the discussion; you are also asked to serve as timekeeper.

The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods.

In order that all groups may begin together, the workshop leader will announce "Begin": take this as your starting point, and watch for the two-minute and one-half minute intervals from that point.

HANDOUT 30

PARTICIPANT D
PHASE II: HYPOTHESIS SELECTION

Page 2

These are the guide-questions the observer used in this phase.

Did the discussion leader:

1. press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)

2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does the passage seem to offer more support for one of these ideas than the other?) If we select this as our "test-idea", are there others on the list that should be eliminated?)

3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT D
PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are the discussion leader. Your role is to be a facilitator rather than a leader. Your specific tasks are:

1. See that the ground-rule is observed. (If someone else doesn't start the discussion right away, you should get the group started by briefly stating your own view.)
2. Work to see that every discussant participates. Try to do this as non-directively as possible: nonverbal cues are helpful here turning to someone, looking at someone, even signalling if necessary.
3. Keep the group to the task of searching for evidence which supports the hypotheses.

HANDOUT 30

PARTICIPANT D
PHASE III: EVIDENCE SEARCH

Page 2

4. See that the participants talk to each other, instead of channeling their remarks through you.

5. If long, involved contributions are making it difficult for the next speaker to summarize and reflect back, call this to the attention of the group.

HANDOUT 30

PARTICIPANT D
PHASE III: EVIDENCE SEARCH

Page 3

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?

2. Did every discussant participate?

3. Did the group seem to give thoughtful attention to the contributions of each person or did they listen more carefully to one person?

4. Did the members ask each other for supporting rationale?

5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT D
PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on one hypothesis from among the three you have been working on, and state this in hypothetical form.

2. Agree on the most promising ways of testing this hypothesis: decide on several action steps you might take to determine the validity of your hypothesis.

You are one of the three discussants in this phase. Try to participate as actively as possible in the task of the group.

HANDOUT 30

PARTICIPANT D
PHASE IV: HYPOTHESIS TESTING

Page 2

These are the guidelines the observer used in this phase.

Does the discussion leader:

1. listen to what discussants are saying?
2. seem pressed to "fill-in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?
3. seem supportive and encouraging to the participants?
4. convey a sense of being personally interested in the group's problem?
5. move the group into a brainstorm-session for one part of this period?

HANDOUT 30

PARTICIPANT D
PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the value patterns and behavior norms of the culture.

One way of doing this is to ask: What behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the observer. Try to give the discussion leader feedback on these questions:

1. Did the discussion leader keep the group working on the task?
2. Did he seem to encourage and support the participation of each discussant?
3. Did he try to increase the interest and involvement of the group in this task? (How?)
4. Did he appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 30

PARTICIPANT D
PHASE V: VALUE ANALYSIS

Page 2

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Seem to encourage and support the participation of each discussant?
3. Try to increase the interest and involvement of the group in this task? (How?)
4. Appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 30

PARTICIPANT E
PHASE I: BRAINSTORMING

The object of the group in this phase is to generate as many constructive guesses as possible about this passage.

The object of each discussant is to share as many hunches as he can think of.

The object of the discussion leader is to help the group realize these aims.

You have two jobs in this round:

You are to participate as actively as possible in the discussion:

You are also asked to serve as timekeeper. The group will have five minutes for the discussion period, and five minutes for the feedback period. You should let your group know when it has two minutes left, and when it has one-half minute left in each of these periods. So that all groups may begin together, the workshop leader will announce "Begin": Take this as your starting point and watch for the two-minute and one-half minute intervals from that point.

HANDOUT 30

PARTICIPANT E
PHASE I: BRAINSTORMING:

These are the guide-questions the observer used to watch the discussion leader:

Did the discussion leader:

1. make an effort to involve each discussant in the hypothesizing process?
2. communicate evaluation or judgment of the ideas expressed--either verbally or non-verbally?
3. discourage participants' expression of judgment and evaluation of each other's ideas?
4. appear to be really listening to comments of the participants? Convey interest in their comments?
5. feel pressed to fill silent periods with his own talk? Was he able to wait for discussant to comment?
6. work to get as many different ideas as possible?
7. prevent pursuit or exploration of any one idea?

HANDOUT 30

PARTICIPANT E
PHASE II: HYPOTHESIS SELECTION

The object of work in this phase is to review the explanatory ideas brought out in the brainstorming phase.

1. Review the list of hunches your group made in the brainstorming phase.
2. Eliminate the repetitions, overlap of ideas and ideas which seem less relevant.
3. Eliminate the ideas your group feels are the weakest hypotheses: the "long shots", the explanations which seem highly improbable.
4. Compare the feasibility of the remaining ideas.
5. Select the three ideas which seem to hold the greatest explanatory potential. These would be the ideas, or hunches, which--whether proven or disproven--would allow the greatest gain in information.

You are the discussion leader in this phase. Your tasks are to:

1. direct the group in reviewing its list of hunches and in eliminating repetitive and less relevant ideas.
2. turn the discussants' attention to testing the feasibility of the explanatory ideas.
3. work toward clarification of ideas and mutual understanding among the discussants.
4. direct the group's efforts toward a comparison of preferred explanations.
5. encourage the discussants' interaction and dialogue with each other.
6. ask for, and encourage discussants to ask for, supportive rationale for each feasibility statement or estimate. (What leads you to that conclusion?)

HANDOUT 30

PARTICIPANT E
PHASE II: HYPOTHESIS SELECTION

7. test the consensus of the group in its selection and refinement of the explanatory ideas. (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT E
PHASE II: HYPOTHESIS SELECTION

Page 3

These are the guide-questions the observer used in this phase.

Did the discussion leader:

1. press the discussants for clarification of the explanatory ideas? (Can you clarify that? Do you mean...? Is that statement clear to all of you?)

2. encourage discussants to compare the feasibility of the explanatory statements? (Which of these ideas seems most reasonable? Does this passage seem to offer more support for one of these ideas than the other? If we select this as our "test-idea" are there others on the list that should be eliminated?)

3. ask for, and encourage discussants to ask for, supportive rationale for each feasibility estimate? (What leads you to think that? What evidence seems to support that view?)

4. encourage the discussants to interact with each other and develop a dialogue among themselves? (What do you think about that statement? Can you respond to that idea?)

5. test the consensus of the group? (How do the rest of you feel about this? Does the group agree on this?)

HANDOUT 30

PARTICIPANT E
PHASE III: EVIDENCE SEARCH

The task of the group in this phase is to develop its thinking about the three hypotheses selected in the last phase. The discussants should think together about the evidence supporting each idea. Each member should work to listen with care to the thinking of other members, and relate his comments to those statements which preceded his.

Work to answer this question: What is the strongest evidence we can find in the passage to support our hypotheses?

GROUND RULE FOR THIS PHASE. After the first comment, no one may express his own idea until he has first reflected back to the last speaker a summary of his comments. When the previous speaker has signaled (probably nonverbally) that the gist of his idea has been reflected, the next person may add his own ideas.

You are one of the three discussants in this phase. Try to participate as actively as possible in the task of the group.

HANDOUT 30

PARTICIPANT E
PHASE III: EVIDENCE SEARCH

Page 2

These are the guidelines the observer used in this phase:

1. Did the group observe the ground rule? What difficulties did they seem to have in following this ground rule?

2. Did every discussant participate?

3. Did the group seem to give thoughtful attention to the contributions of each person or did they listen more carefully to one person?

4. Did the members ask each other for supporting rationale?

5. Did the participants talk equally to each other, or did they seem to direct their comments largely to one person?

HANDOUT 30

PARTICIPANT E
PHASE IV: HYPOTHESIS TESTING

The group has two tasks in this phase:

1. Agree on one hypothesis from among the three you have been working on, and state this in hypothetical form.

2. Agree on the most promising ways of testing this hypothesis: decide on several action steps you might take to determine the validity of your hypothesis.

You are the observer in this round.

Does the discussion leader:

1. listen to what discussants are saying?

2. seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?

3. seem supportive and encouraging to the participants?

4. convey a sense of being personally interested in the group's problem?

5. move the group into a brainstorm-session for one part of this period?

When the feedback period begins, ask everyone in your group to turn to the next page in their briefs: this will be a copy of the observation guide you have been using (above).

You should proceed to share your feedback with the group. Try to use specific examples--what did the discussion leader actually do or say? What did the leader or discussants do that

HANDOUT 30

PARTICIPANT E
PHASE IV: HYPOTHESIS TESTING

seemed particularly helpful to achieving the goals for this phase?

When you have summarized your observations, ask the other group members if they have comments about any of the observation points.

You have five minutes for both of these tasks: giving your own observations, and getting further feedback from the group.

HANDOUT 30

PARTICIPANT E
PHASE IV: HYPOTHESIS TESTING

These are the guidelines the observer used in this phase:

Does the discussion leader:

1. listen to what discussants are saying?

2. seem pressed to "fill in" all of the silent periods with his own talk, or with prodding questions? Can he wait for participants' responses?

3. seem supportive and encouraging to the participants?

4. convey a sense of being personally interested in the group's problem?

5. move the group into a brainstorm-session for one part of this period?

HANDOUT 30

PARTICIPANT E
PHASE V: VALUE ANALYSIS

Take one more look at the passage. This time search for indications of the value patterns and behavior norms of the culture.

One way of doing this is to ask: what behaviors or viewpoints seem to be approved by the persons described in the passage?

Another approach is to look for expression of values or attitudes different from your own. Contrast these values with your own and with those of other members of the group.

You are the recorder in this round. Record those value patterns and behavior norms listed by your group as best describing the culture.

You are also a discussant.

HANDOUT 30

PARTICIPANT E
PHASE V: VALUE ANALYSIS

These are the guidelines the observer used in this phase:

1. Did the discussion leader keep the group working on the task?
2. Seem to encourage and support the participation of each discussant?
3. Try to increase the interest and involvement of the group in this task? (How?)
4. Appear to be listening to what discussants were saying?
5. Did the group develop a norm of being free to express value positions which differ from those held by others in the group?

HANDOUT 31

HISTORIC DOCUMENT
THE OLD MAN WITH THE BROKEN ARM

Page 1

At ________________ an old man--four-score and eight:
The hair on his head and the hair of his eyebrows--white as the new snow
Leaning on the shoulders of his great-grandchildren, he walks in front of the Inn;
With his left arm he leans on their shoulder; his right arm is broken.
I asked the old man how many years had passed since he broke his arm,
I also asked the cause of the injury, how and why it happened?
The old man said he was born and reared in the District of ___________________;
At the time of his birth--a wise reign; no wars or discords.
Often I listened in the Pear-Tree Garden to the sound of flute and song;
Naught I knew of banner and lance, nothing of arrow or bow.
Then came the wars of T _______________ and the great levy of men;
Of three men in each house,--one man was taken.

HANDOUT 31

HISTORIC DOCUMENT
THE OLD MAN WITH THE BROKEN ARM

And those to whom the lot fell, where were they taken to?
Five months' journey, a thousand miles--away to ____________.
We heard it said that in ______________ there flows the ________________ River.
As the flowers fall from the pepper-trees, poisonous vapours rise.
When the great army waded across, the water seethed like a cauldron;
When barely ten had entered the water, two of three were dead.
To the north of my village, to the south of my village the sound of weeping and wailing,
Children parting from fathers and mothers; husbands parting from wives.
Everyone says that in expeditions against the ___________ tribes
Of a million men who are sent out, not one returns.
I, that am old, was then twenty-four;
My name and fore-name were written down in the rolls of the Board of War
In the depth of the night not daring to let any one know

HANDOUT 31

HISTORIC DOCUMENT
THE OLD MAN WITH A BROKEN ARM

Page 3

I secretly took a huge stone and dashed it against my arm.
For drawing the bow and waving the banner now wholly unfit;
I knew henceforward I should not be sent to fight in_________.
Bones broken and sinews wounded could not fail to hurt,
I was ready enough to bear pain, if only I got back home.
My arm--broken ever since: it was sixty years ago.
One limb, although destroyed,--whole body safe!
But even now on winter nights when the wind and rain blow
From evening on till day's dawn I cannot sleep for pain.
Not sleeping for pain   Is a small thing to bear,
Compared with the joy of being alive when all the rest are dead.
For otherwise, years ago, at the ford of ___________River
My body would have died and my soul hovered by the bones that no one gathered.
A ghost, I'd have wandered in____________,always looking for home.
Over the graves of ten thousand soldiers, mournfully hovering.
So the old man spoke, And I bid you listen to his words
Have you not heard
That the Prime Minister of K____________________
Did not reward frontier exploits, lest a spirit of aggression

HANDOUT 31

HISTORIC DOCUMENT
THE OLD MAN WITH A BROKEN ARM

should prevail?   And have you not heard
That the Prime Minister of T________________
43 Desiring to win imperial favour, started a frontier war?
But long before he could win the war, people had lost their temper,
Ask the man with the broken arm in the village of __________!

HANDOUT 32

WHAT IS A SIMULATION?

Simulations, as used in MACOS, are operating models of social situations or processes. The model is constructed by means of analyzing the significant variables which make up the processes to be illustrated. Those variables which are considered most significant are built into a game situation. Obviously the criteria employed in the selection process of these variables are crucial, for all of the variables can never be identified or isolated. Even if this goal were achieved, the wide range of variables in the simulation would make it unmanageable.

In incorporating the variables, practical decisions about the components of a game setting have to be made - these involve a translation and substitution process. As an example, in the "Seal Hunt" game it would not be practical to have real ice and live seals, nor is it necessary in terms of the game objectives. Therefore, a game board and meat stickers substitute for the real environment. Reality, then, is represented; simulations themselves are not reality. However, consonant with the principles of simulation, these representations of reality must function in a manner analogous to their "real" life functions.

In playing a simulation game, players usually take roles. In the "Seal Hunt", the players represent Eskimo seal hunters. It is important to make a distinction between the roles assumed in the simulated setting and what is usually referred to as role playing. While engaged in a simulation, the players are not "acting out" a situation, but rather they are "acting upon" the situation. The important distinction is that there is an active decision making element involved in a simulation that is not required in role play.

The teacher, in using simulation as an instructional device, must have a clear conception of the roles (processes) being modeled. He must also constantly cause students to analyze and to question the validity of the model that they evolve through successive plays. This focus must be maintained throughout the activity in order to maintain the integrity of simulation as an instructional techniques.

HANDOUT 33

SUGGESTIONS FOR USING SIMULATIONS IN THE CLASSROOM

1) On the first playing of a simulation briefly explain the game rules then let the students play through the game. Do not be concerned with making fine distinctions in terms of the rules.

2) The teacher should not suggest game strategies to the students. Simulations are unique in that they offer the learner an opportunity to manipulate and act upon an environment and see the results of his action.

3) Printed game rules are not inviolate. So long as they do not violate the basic model of the game, students should be allowed and encouraged to manipulate the rules.

4) Research has shown that it is essential for the teacher to get feedback from students as to why they developed the strategies they did in playing the simulation. This can be done by discussing game record sheets, student description of the strategies they followed, etc.

5) The students' understanding of the purpose of specific rules and design elements in the game in terms of their relation to the real life situation, is a good indication of their knowledge of the concepts being taught in the simulation. (i.e. Why are there so many seal breathing holes?)

6) Follow-up discussions should be an integral part of teaching with simulations. The discussion should attempt to relate the game to its real-life counterpart. The teacher should probe not expound.

7) Several playings of most simulations are necessary if the learner is to develop, assimilate and internalize the concepts (processes) of the model. Therefore, the teacher needs to pace the playing of the game so that students do not become bored or tired of the game too quickly.

HANDOUT 34

CLASSROOM TEACHING-LEARNING SITUATION

Participants are to be grouped in quartets. One pair of the quartet will plan and execute a MACOS lesson while the other pair plans and executes an observation schema based on the lesson. Quartet pairs are to rotate in the teacher/observer role.

Tasks for quartet members are:

1. Specifying teaching objectives.
2. Designing or selecting observation instruments to assess teacher effectiveness in meeting objectives.
3. Planning and executing teaching strategies (classroom methodology and interaction).
4. Planning and executing observation strategies.
5. Designing and administering student feedback instruments.
6. Giving and receiving feedback in quartets regarding teacher effectiveness in meeting objectives.
7. Sharing teaching practices with all workshop participants in community sessions and through documentation (see Handouts #35 and 36).

HANDOUT 35

DOCUMENTATION GUIDE FOR TEACHER

I. Objectives of the lesson.

II. Rationale statement for objectives.

III. Materials used (include paste, paint, other supplies and also copies of all supplementary materials you have designed such as copy of student feedback sheet).

IV. Operating instructions (time allotment and topics).

V. Inferences and judgments based on descriptive data.

HANDOUT 36

DOCUMENTATION FOR OBSERVER

I. Objectives:

Specify teaching objectives as you understand them. Specify data you will collect to assess these objectives.

II. Material and equipment used.

III. Observation techniques and instruments used (include copies of all instruments).

IV. Inferences and judgments based on descriptive data (with respect to techniques and instruments for observation).